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RESTRICTIVE THRESHOLD FOR FEDERAL COURT
JURISDICTION IN PATENT DECLARATORY JUDGMENTS

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This volume of the Wake Forest Intellectual
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Robert K. Walsh

who retires this year from eighteen years as dean of the Wake Forest
University School of Law. Dean Walsh has consistently and
graciously supported the Journal during his tenure, providing the
resources necessary for the publication to improve its quality and
stature. The Journal staff greatly appreciates Dean Walsh's support
and his long service to the School.

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Wake Forest University School of Law

P.O. Box 7206 Reynolda Station

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**WAKE FOREST
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**A REASONABLE APPREHENSION OF LAWSUIT:
A RESTRICTIVE THRESHOLD FOR FEDERAL COURT
JURISDICTION IN PATENT DECLARATORY JUDGMENTS**

William S. Nabors †

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I. INTRODUCTION

Under Federal Circuit patent law, a person injured by an adverse patent may not bring a declaratory judgment action against a patent owner to obtain a judgment of patent validity or non-infringement unless the potential infringer has a reasonable apprehension of imminent suit by the patent owner. When the patent owner does not threaten the potential infringer, or when there is no possibility that the patent owner will sue, then the potential infringer fails the reasonable apprehension of lawsuit test and has no standing to bring suit.

While the Federal Circuit considers the reasonable apprehension of lawsuit test the constitutional threshold for standing,

the test may be a higher standard than the Constitution requires. This article will explore the requirements for a controversy under the Declaratory Judgment Act and will discuss possible differences between the reasonable apprehension of lawsuit test and the constitutional test for standing as they apply to patent infringement and invalidity actions.

II. BACKGROUND

A federal court must have both statutory jurisdiction and constitutional jurisdiction to adjudicate a dispute.¹ Article III, Section 2, Clause 1 of the U.S. Constitution grants federal courts the jurisdiction to hear cases arising under the Constitution, federal laws, and treaties, as well as other cases and controversies enumerated by Article III of the Constitution.² Naturally, Congress provides the statutory jurisdiction, primarily through Title 28 of the United States Code.³ The Declaratory Judgment Act grants statutory authority for federal courts to confer declaratory judgments in “case[s] of actual controversy.”⁴

Prior to the enactment of the Declaratory Judgment Act in 1934, a patent owner controlled when a controversy between a potential patent infringer and the patent owner would go before a judge.⁵ The patent owner could threaten to sue potential infringers and the potential infringers’ customers, whether or not the patent owner intended to sue, because the patent owner was within his rights to use “all lawful means to protect [his] monopoly.”⁶ At that time, federal courts normally would not allow a potential patent infringer to sue a patent owner when the patent owner threatened suit.⁷ A court would allow a potential infringer to sue the patent owner for unfair competition when the patent owner was acting not only to protect the owner’s patent rights, but to stifle competition or to destroy the

† Associate Patent Attorney, Hahn Loeser and Parks, LLP; J.D., The University of Akron School of Law. The author would like to thank Professor Jay Dratler, Jr. for his guidance.

¹ Exxon Mobil Corp. v. Allapattah Servs. Inc., 125 S. Ct. 2611, 2616-17 (2005).

² U.S. CONST., art. III, § 2, cl. 1.

³ 28 U.S.C.A. §§ 1331-69 (2006).

⁴ 28 U.S.C.A. § 2201 (2006).

⁵ *Developments in the Law*, 62 HARV. L. REV. 787, 863 (1949).

⁶ A.B. Farquhar Co. v. Nat’l Harrow Co., 102 F. 714, 714 (3d Cir. 1900).

⁷ *E.g.* Clip Bar Mfg. Co. v. Steel Protected Concrete Co., 209 F. 874, 875 (E.D. Pa. 1913); Mitchell v. Int’l Tailoring Co., 169 F. 145, 146 (S.D.N.Y. 1909).

potential infringer.⁸ Potential infringers had difficulty proving unfair competition due to the requirement that potential infringers show the patent owner was acting in bad faith.⁹ Consequently, a patent owner could exploit his patent rights by convincing infringing and non-infringing competitors to settle or buy licenses to stop the patent owner's harassment.¹⁰ The Declaratory Judgment Act of 1934 gave potential infringers the ability to sue patent owners¹¹ by giving federal courts authority to confer declaratory judgments in "case[s] of actual controversy."¹²

The Supreme Court considers actual controversies in declaratory judgment cases to be those that are controversies within the meaning of the U.S. Constitution.¹³ The Federal Circuit asserts that the actual controversy requirement for a declaratory judgment of patent non-infringement or patent invalidity requires the declaratory plaintiff to satisfy a reasonable apprehension of lawsuit test.¹⁴ Using

⁸ *E.g.* *Racine Paper Goods Co. v. Dittgen*, 171 F. 631, 636 (7th Cir. 1909); *A.B. Farquhar Co. v. Nat'l Harrow Co.*, 102 F. 714, 716 (3d Cir. 1900). These causes of action required diversity of citizenship.

⁹ *Developments in the Law*, *supra* note 5, at 863.

¹⁰ *Wembly, Inc. v. Superba Cravats, Inc.*, 315 F.2d 87, 89 (2d Cir. 1963). *Wembly* characterized a patent owner's abusive practice of threatening potential infringers with suits without intending to sue as a "racket" because the patent owner could coerce a potential infringer into a settlement without ever knowing whether the patent was valid. *Id.* If the patent owner did sue the potential infringer, the patent owner could dismiss the complaint without prejudice if the potential infringer challenged the validity of the patent. *Id.* Thus, a patent owner never had to subject a patent's validity to the judgment of a court. *Id.*

¹¹ *Arrowhead Indus. Water, Inc. v. Ecolochem, Inc.*, 846 F.2d 731, 735 (Fed. Cir. 1988).

¹² 28 U.S.C.A. § 2201(a) ("In a case of actual controversy within its jurisdiction, except with respect to Federal taxes other than actions brought under section 7428 of the Internal Revenue Code of 1986, a proceeding under section 505 or 1146 of title 11, or in any civil action involving an antidumping or countervailing duty proceeding regarding a class or kind of merchandise of a free trade area country (as defined in section 516A(f)(10) of the Tariff Act of 1930), as determined by the administering authority, any court of the United States, upon the filing of an appropriate pleading, may declare the rights and other legal relations of any interested party seeking such declaration, whether or not further relief is or could be sought. Any such declaration shall have the force and effect of a final judgment or decree and shall be reviewable as such." (emphasis added)).

¹³ *Aetna Life Ins. Co. v. Haworth*, 300 U.S. 227, 239-40 (1937) ("The Declaratory Judgment Act of 1934 . . . is operative only in respect to controversies which are such in the constitutional sense."); *see also* S. Rep. No. 73-1005 (1934), as reprinted in EDWIN BORCHARD, DECLARATORY JUDGMENTS 1047-48 (2d ed., Banks-Baldwin Law Publ'g Co., 1941).

¹⁴ *Jervis B. Webb Co. v. S. Sys.*, 742 F.2d 1388, 1398 (Fed. Cir. 1984) (the

this test, the Federal Circuit has repeatedly held that in patent declaratory judgments, a declaratory plaintiff cannot sue a patent owner unless the declaratory plaintiff is under a reasonable apprehension of lawsuit.¹⁵ A “reasonable apprehension of lawsuit” means that the declaratory plaintiff reasonably believes that the patent owner was going to sue the declaratory plaintiff imminently, had the declaratory plaintiff not sued first.¹⁶

The problem with the Federal Circuit’s reasonable apprehension of lawsuit test is that it bars some declaratory judgments between adverse parties where a declaration would resolve a dispute and prevent a declaratory plaintiff from taking actions that accrue damages. *Medimmune, Inc. v. Genentech, Inc.* is an example of how the Federal Circuit applies the reasonable apprehension of lawsuit standard.¹⁷

In *Medimmune*, the declaratory defendant Genentech owned two patents¹⁸ pertaining to methods of producing functional immunoglobulin.¹⁹ Medimmune and Genentech entered into a license agreement in 1997 for the first Genentech patent, U.S. Patent Number 4,816,567, and under the terms of the license Medimmune would receive a license for the second Genentech patent when it issued.²⁰ When the second patent issued as U.S. Patent Number 6,331,415 in

“controversy requirement for a patent invalidity declaratory judgment action requires” a reasonable apprehension of lawsuit); *Teva Pharm. USA, Inc. v. Pfizer Inc.*, 395 F.3d 1324, 1335 (Fed. Cir. 2005) (the reasonable apprehension of lawsuit standard determines “whether there is an actual controversy in suits requesting a declaration of patent non-infringement or invalidity” (quoting *EMC Corp. v. Norand Corp.*, 89 F.3d 807, 811 (Fed. Cir. 1996))).

¹⁵ *E.g.* *C.R. Bard, Inc. v. Schwartz*, 716 F.2d 874, 879 (Fed. Cir. 1983) (adopting and applying the reasonable apprehension of lawsuit because some “[c]ourts have interpreted the controversy requirement in the patent field” to require it); *Jervis B. Webb*, 742 F.2d at 1398-99; *Arrowhead*, 846 F.2d at 736; *B.P. Chem. Ltd. v. Union Carbide Corp.*, 4 F.3d 975, 978 (Fed. Cir. 1995); *Teva*, 395 F.3d at 1332.

¹⁶ *Arrowhead*, 846 F.2d at 736.

¹⁷ *Medimmune, Inc. v. Genentech, Inc.*, 427 F.3d 958, 961 (Fed. Cir. 2005).

¹⁸ *Id.* Genentech co-owned patents with City of Hope; Recombinant Immunoglobulin Preparations, U.S. Patent No. 4,816,567 (filed Apr. 8, 1983) (issued Mar. 28, 1989); Methods of Producing Immunoglobulins, Vectors and Transformed Host Cells for Use Therein, U.S. Patent No. 6,331,415, (filed June 10, 1988) (issued Dec. 18, 2001).

¹⁹ U.S. Patent No. 4,816,567, *supra* note 18; U.S. Patent No. 6,331,415, *supra* note 18. Immunoglobulin is any group of structurally related proteins which function as antibodies. THE OXFORD AMERICAN DICTIONARY AND THESAURUS 735 (Oxford Univ. Press 2003).

²⁰ *Medimmune*, 427 F.3d at 962.

2001,²¹ Genentech asserted that the license for the 6,331,415 patent covered a Medimmune product called Synagis®,²² and thereafter Medimmune made royalty payments to Genentech.²³ However, Medimmune objected to paying the royalty on the 6,331,415 patent, and Medimmune sued Genentech seeking a declaratory judgment that the 6,331,415 patent was invalid or unenforceable.²⁴ There was not a breach of contract throughout the litigation, and Medimmune continued to pay royalties.²⁵

The district court dismissed the case for lack of jurisdiction on the ground that there was no actual controversy as required by the Declaratory Judgment Act.²⁶ The Federal Circuit affirmed the district court by holding that there was no controversy to support Medimmune's declaratory judgment action because the patent license precluded a reasonable apprehension of lawsuit.²⁷

Medimmune held that jurisdiction under the Declaratory Judgment Act requires a reasonable apprehension of lawsuit.²⁸ The Federal Circuit reasoned that because Medimmune continued to pay royalties and because there was no other breach of the license agreement, patent owner Genentech could not sue Medimmune.²⁹ As Genentech had no cause of action against Medimmune, Medimmune consequently could not possibly have a reasonable apprehension of

²¹ Genentech's 6,331,415 patent issued following a complex prosecution. *Id.* at 961-62. An interference was declared between the Genentech application and U.S. Patent Number 4,816,397 owned by Celltech, another defendant in *Medimmune*. *Id.* at 961. The interference resulted in a U.S. Patent Office decision favoring Celltech, and Medimmune later licensed Celltech's patent. *Id.* After the interference, Genentech appealed the decision to the district court in the Northern District of California. *Id.* Celltech and Genentech settled before trial, agreeing that the Genentech application had priority. *Id.* at 962. The Federal Circuit entered a judgment favoring Genentech based on the parties' resolution, and the U.S. Patent Office issued the 6,331,415 patent in 2001. *Id.* The Patent Office Board of Patent Appeals and Interferences asserted that the Celltech patent was cancelled by operation of law because the district court judgment giving Genentech priority was final and not appealed. *Id.*

²² *Id.*

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.* at 964-65.

²⁸ *Id.* at 965. The court ruled that Medimmune did not have standing under the Declaratory Judgment Act without a reasonable apprehension of lawsuit. *Id.*

²⁹ *Id.* at 963.

lawsuit.³⁰ Medimmune argued that by barring the declaratory judgment action, the Federal Circuit was effectively applying licensee estoppel,³¹ a practice disapproved of by the Supreme Court in *Lear, Inc. v. Adkins*.³² The Federal Circuit distinguished *Lear* by characterizing the licensee in *Lear* as a defaulting licensee, contrasted with Medimmune being a licensee in good standing.³³ *Medimmune* held that *Lear, Inc. v. Adkins* only provided a patent invalidity defense in a suit against a defaulting licensee, not as the ground for a declaratory judgment action.³⁴

As *Medimmune* suggests, the Federal Circuit applies the reasonable apprehension of lawsuit strictly. The existence of an adverse patent alone is not enough to create an actual controversy for a declaratory judgment.³⁵ Nor will the mere presence of adverse legal interests create an actual controversy, in the Federal Circuit's view, regardless of how adverse the interests are.³⁶ When there is no reasonable apprehension of lawsuit, the Federal Circuit will not grant

³⁰ *Id.* at 964-65.

³¹ *Id.* at 962-63. The doctrine of licensee estoppel “establishes that so long as a licensee is operating under a license agreement he is estopped to deny the validity of his licensor’s patent . . .” *Lear, Inc. v. Adkins*, 395 U.S. 653, 656 (1969).

³² *Lear*, 395 U.S. at 671. In *Lear*, *Lear, Inc.* hired inventor Adkins to design improvements for gyroscopes. *Id.* at 655. Adkins and *Lear* signed an agreement that Adkins would be the owner of the improvements Adkins developed, but *Lear* would have a license to practice them. *Id.* at 657. A second agreement gave *Lear* the right to terminate the license if the U.S. Patent Office did not issue a patent or if a court held the patent invalid. *Id.* Adkins developed improvements that *Lear* incorporated into its production. *Id.* at 655. Adkins patented the improvements, but during a long patent prosecution, *Lear* stopped making royalty payments. *Id.* at 659. Adkins sued *Lear* for royalties, and *Lear* tried to assert patent invalidity as a defense. *Id.* at 660. All of the California courts in the litigation, from the California Superior Court through the California Supreme Court, held that licensee estoppel barred *Lear* from challenging the patent. *Id.* at 660-61. The U.S. Supreme Court disagreed, holding that the trial court had to give *Lear* the opportunity to avoid royalties by showing patent invalidity and overruling *Automatic Radio Manufacturing Co. v. Hazeltine Research, Inc.*, 339 U.S. 827 (1950), which held that licensee estoppel was the general rule. *Lear*, 395 U.S. at 674.

³³ *Medimmune*, 427 F.3d at 963.

³⁴ *Id.*

³⁵ *BP Chemicals Ltd. v. Union Carbide Corp.*, 4 F.3d 975, 978 (Fed. Cir. 1993); BORCHARD, *supra* note 13, at 807 (“[T]he mere existence of the patent is not a cloud on title...”).

³⁶ *Teva Pharm. USA, Inc. v. Pfizer Inc.*, 395 F.3d 1324, 1333 (Fed. Cir. 2005) (adverse legal interests not sufficient to confer jurisdiction absent a reasonable apprehension of lawsuit).

jurisdiction over a declaratory judgment.³⁷

Why does the Federal Circuit interpret the Declaratory Judgment Act so narrowly? Congress passed the Declaratory Judgment Act in part to avoid the social and economic waste incurred by accruing damages, or breaking a contract, or violating a statute in order to create a justiciable controversy.³⁸ The Federal Circuit requirement in *Medimmune* that Medimmune breach its contract with Genentech³⁹ appears to be contrary to the congressional intent of the Declaratory Judgment Act.

Some have asserted that the patent owner should be the one to decide whom to sue, suggesting that a patent owner has a right to be left alone.⁴⁰ But when there is an actual controversy, even when there is not a reasonable apprehension of lawsuit, it is likely that the parties will end up in court anyway. It should not matter who initiates the suit.⁴¹ If the patent owner does not object to the declaratory plaintiff's activities, or the patent owner does not want to enforce the patent, a simple settlement would quickly resolve the matter.

Public policy supports a declaratory plaintiff who seeks a judgment against a patent owner in the presence of an actual controversy. While one goal of the patent system is to encourage innovation,⁴² the "ultimate goal of the patent system" is for inventors to put new technology into the public domain by their disclosures in patents.⁴³ An inventor receives a limited monopoly in exchange for its disclosure of the invention.⁴⁴ As important as a patent monopoly is to a patent owner, it is equally important to the public that worthless patents not interfere with competition.⁴⁵ Patent monopolies have

³⁷ *Id.*

³⁸ S. Rep. No. 73-1005 (1934), as reprinted in BORCHARD, *supra* note 13, at 1044.

³⁹ *Medimmune*, 427 F.3d at 964-65.

⁴⁰ BORCHARD, *supra* note 13, at 807; see also *Zenie Bros. v. Miskend*, 10 F. Supp. 779, 782 (S.D.N.Y. 1935) ("The defendant's fears that patent owners will be harassed by actions for declaratory judgment on the part of those who may or may not be infringers have not been overlooked.").

⁴¹ *Aetna Life Ins. Co. v. Haworth*, 300 U.S. 227, 244 (1937) (when summarizing what makes a justiciable controversy, the Court reasoned that "[i]t is the nature of the controversy, not the method of its presentation or the particular party who presents it, that is determinative").

⁴² *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989).

⁴³ *Id.* at 151.

⁴⁴ *Id.* at 150-51.

⁴⁵ *Lear, Inc. v. Adkins*, 395 U.S. 653, 663-64 (1969) (citing *Pope Mfg. Co. v. Gormully*, 144 U.S. 224, 234 (1892)).

significant economic effects because patents curtail access to a free market.⁴⁶ The Supreme Court reasoned that because of the economic impact of patent monopolies, the public has a “paramount interest” in keeping patent monopolies “within their legitimate scope.”⁴⁷ As Justice O’Connor explained in *Bonito Boats v. Thunder Craft Boats*, “free exploitation of ideas will be the rule.”⁴⁸ One valuable benefit of the Declaratory Judgment Act is allowing potential infringers to weed out “scarecrow” patents without waiting for the patent owner to sue.⁴⁹

The Federal Circuit insists that the reasonable apprehension of lawsuit test establishes the constitutional threshold for jurisdiction over declaratory judgments,⁵⁰ but the Federal Circuit has never clearly explained the rationale for its opinion.⁵¹ The Federal Circuit’s constitutional threshold is not the same as the Supreme Court’s constitutional threshold. The Supreme Court has held that the doctrine of constitutional standing establishes the constitutional threshold for jurisdiction in any federal court action, including declaratory judgments.⁵² If constitutional standing and a reasonable apprehension of lawsuit were synonymous, then there could be no complaint. However, it appears that the reasonable apprehension of lawsuit is more limiting than constitutional standing, and thus bars some actions unnecessarily.

One might argue that the test used to determine whether to confer jurisdiction over a declaratory action is largely immaterial because there is no requirement that a district court hear any declaratory judgment action.⁵³ A district court has substantial

⁴⁶ *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 816 (1945).

⁴⁷ *Id.*

⁴⁸ *Bonito Boats*, 489 U.S. at 151.

⁴⁹ *Societe de Conditionnement en Aluminium v. Hunter Eng’g. Co., Inc.*, 655 F.2d 938, 943 (9th Cir. 1981) (citing *Bresnick v. U. S. Vitamin Corp.*, 139 F.2d 239, 242 (2d Cir. 1943)).

⁵⁰ *Teva Phrm. USA, Inc. v. Pfizer Inc.*, 395 F.3d 1324, 1335.

⁵¹ While it seems the Federal Circuit has not explained the connection between a reasonable apprehension of lawsuit and Article III, the Circuit has acknowledged such a connection. *See, e.g., id.* (“[W]e developed the [reasonable apprehension of lawsuit test] to determine whether there is an actual controversy in suits requesting a declaration of patent non-infringement or invalidity.”).

⁵² *Allen v. Wright*, 468 U.S. 737, 750 (1984). In *Allen*, parents of black children in public school sought a declaratory judgment that the I.R.S. failed to deny tax-exempt status to racially discriminatory private schools. *Id.* at 739-40. The Court dismissed for lack of standing. *Id.* at 766.

⁵³ *Teva*, 395 F.3d at 1331 (“Even if there is an actual controversy, the district court is not required to exercise declaratory judgment jurisdiction”) (citing *EMC*

discretion over whether to decline declaratory judgment jurisdiction, even in cases of actual controversy.⁵⁴ Thus, one might argue that the court's substantial discretion easily absorbs any difference between constitutional standing and the reasonable apprehension of lawsuit test. However, given Congress' important goal of preventing social and economic waste,⁵⁵ it is beneficial to use declaratory judgments to the full extent granted by the Constitution.

III. DEVELOPMENT OF THE REASONABLE APPREHENSION OF LAWSUIT STANDARD IN PATENT DECLARATORY JUDGMENTS

A. Declaratory Judgments May Not be Advisory Opinions

The United States began considering whether to allow declaratory judgments in federal court in the early twentieth century.⁵⁶ Early U.S. development of the declaratory judgment considered when a declaratory judgment would be justiciable under Article III.⁵⁷ As Article III extends federal jurisdiction to cases and to controversies,⁵⁸ it followed that declaratory judgments should be allowable when parties were embroiled in a case or controversy within the meaning of the Constitution.⁵⁹ Unfortunately, it is not always clear when a case or controversy is within the meaning of the Constitution.

The case and controversy requirement of the Constitution grants judicial power to the federal courts, but also limits federal judiciary power.⁶⁰ One purpose of the case and controversy requirement as a limitation is to maintain the separation of powers between the judicial, executive, and legislative branches.⁶¹ Separation of powers assures that the federal courts will not intrude into the roles

Corp. v. Norand Corp., 89 F.3d 807, 810 (Fed. Cir. 1996)).

⁵⁴ *Id.*

⁵⁵ S. Rep. No. 73-1005 (1934), reprinted in BORCHARD, *supra* note 13, at 1044.

⁵⁶ BORCHARD, *supra* note 13, at 132. New Jersey enacted a declaratory judgment statute in 1915, and by 1939 approximately forty states had declaratory judgment statutes. *Id.* at 132-33. A federal declaratory judgment bill was introduced in Congress for the first time in 1919. *Id.* at 134 n.39.

⁵⁷ See *infra* notes 81-124 and accompanying text.

⁵⁸ U.S. CONST., art. III, § 2, cl. 1.

⁵⁹ Aetna Life Ins. Co. v. Haworth, 300 U.S. 327, 239-40 (1937) ("The Declaratory Judgment Act of 1934 . . . is operative only in respect to controversies which are such in the constitutional sense.").

⁶⁰ Valley Forge Christian Coll. v. Ams. United for Separation of Church & State, Inc., 454 U.S. 464, 476 (1982).

⁶¹ Allen v. Wright, 468 U.S. 737, 750 (1984).

assigned to the executive and legislative branches.⁶²

An important consequence of the separation of powers principle is the federal court's ban on advisory opinions.⁶³ An advisory opinion is a decision based on hypothetical facts or abstract issues that does not finally resolve a matter.⁶⁴ A case is not an advisory opinion when it involves a dispute between adverse litigants, and when a court's decision would have an effect on the parties.⁶⁵ Erwin Chemerinsky traces these requirements through two situations early in Supreme Court history: *Hayburn's Case* in 1792,⁶⁶ and correspondence between the Supreme Court and Thomas Jefferson in 1793.⁶⁷

Hayburn's Case involved an act of Congress that instituted a procedure whereby war veterans could petition a federal circuit court to receive a pension from the United States.⁶⁸ Under the Act, the Secretary at War and Congress could suspend or revise the court's decision in any such case.⁶⁹ In *Hayburn*, the Attorney General for Pennsylvania filed a motion seeking a writ of mandamus to force the circuit court to hear a pension petition from William Hayburn.⁷⁰ The Justices did not grant the motion.⁷¹

The Justices would not allow the motion because the circuit court's decision in Hayburn's pension case would be subject to

⁶² *Valley Forge Christian College*, 454 U.S. at 474 (citing *Flast v. Cohen*, 392 U.S. 83, 95 (1968)).

⁶³ *Flast*, 392 U.S. at 96 (the "rule against advisory opinions implements the separation of powers prescribed by the Constitution and confines federal courts to the role assigned them by Article III"); *Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 101 (1998) (advisory opinions have been ". . . disapproved by this Court from the beginning").

⁶⁴ *Fund for Animals v. Williams*, 311 F.Supp.2d 1, 5 (D.D.C. 2004) (defining advisory opinions as those "decisions based on hypothetical facts or abstract issues"); *Ill. ex rel. Barra v. Archer Daniels Midland Co.*, 704 F.2d 935, 941 (7th Cir. 1983) (defining an advisory opinion as a "decision that does not resolve an actual case or controversy").

The term advisory opinion comes from an old English practice in which the King and the House of Lords would consult with judges about questions of law. WALTER H. ANDERSON, *ACTIONS FOR DECLARATORY JUDGMENT* 26-27 (West Publ'g Co. 1940). The English advisory opinions had no binding force or effect. *Id.*

⁶⁵ ERWIN CHEMERINSKY, *FEDERAL JURISDICTION* § 2.2, 49-51 (3d ed., Aspen Law & Bus., 1999).

⁶⁶ *Id.* at 51.

⁶⁷ *Id.* at 50.

⁶⁸ *Hayburn's Case*, 2 U.S. 409, 410 (1792).

⁶⁹ *Id.*

⁷⁰ *Id.* at 409.

⁷¹ *Id.*

revision and control by the Executive and Legislative branches.⁷² Such an Executive or Legislative review of a federal court decision would have been inconsistent with the separation of powers of the Constitution.⁷³ Congress had essentially delegated an administrative function to the courts.⁷⁴

In 1793, President George Washington sent Secretary of State Thomas Jefferson to the Supreme Court for advice regarding how the Executive branch should act with respect to the ongoing war between France and England.⁷⁵ In his request, Mr. Jefferson acknowledged that he presented his request outside of a recognized justiciable controversy.⁷⁶ The Supreme Court declined to render any advice.⁷⁷ In a letter to President Washington, Chief Justice Jay asserted that the constitutional separation of powers prevented the Supreme Court from deciding cases “extra-judicially.”⁷⁸ Chief Justice Jay may have used “extra-judicially” to mean those cases falling outside of the traditional adversarial judicial process.⁷⁹ However, the Supreme Court later interpreted Chief Justice Jay’s response to indicate that the constitutional separation of powers prohibits all advisory opinions.⁸⁰

After the Supreme Court analyzed federal jurisdiction in a declaratory judgment for the first time⁸¹ in 1927,⁸² it was not clear whether the Supreme Court considered all declaratory judgments to be advisory opinions.⁸³ In *Liberty Warehouse Co. v. Grannis*, a

⁷² *Id.* at 410.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ CHEMERINSKY, *supra* note 65, at 50. The Executive branch sought advice in interpreting treaties and laws, and sought an opinion on such matters as whether the U.S. could sell ships and weapons to both England and France. *Id.*

⁷⁶ Thomas Jefferson recognized that the Court would be giving such advice under circumstances which “do not give a cognizance of them to the tribunals of the country.” *Muskrat v. United States*, 219 U.S. 346, 354 (1911) (citing *Correspondence & Public Papers of John Jay*, vol 3, 486).

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ CHEMERINSKY, *supra* note 65, at 50.

⁸⁰ *Vieth v. Jubelirer*, 541 U.S. 267, 302 (2004) (the Justices’ response to Mr. Jefferson indicated that separation of powers dictates that advisory opinions are beyond the Court’s jurisdiction).

⁸¹ BORCHARD, *supra* note 13, at 176.

⁸² *Liberty Warehouse Co. v. Grannis*, 273 U.S. 70 (1927).

⁸³ *Pub. Serv. Comm’n. of Utah v. Wycoff Co., Inc.*, 344 U.S. 237, 241 (1952) (“Previous to [the Declaratory Judgment Act’s] enactment there were responsible expressions of doubt that constitutional limitations on federal judicial power would permit any federal declaratory judgment procedure.”); Donald L. Doernberg &

declaratory plaintiff, Liberty Warehouse, sued Commonwealth Attorney Grannis as a representative of Kentucky in federal district court.⁸⁴ Liberty sought a declaration that a 1924 Kentucky statute regulating the sale of leaf tobacco was unconstitutional.⁸⁵ Liberty alleged that the Commonwealth Attorney had threatened the plaintiff with civil and criminal punishments for violation of the statute, and that he had prepared indictments against Liberty.⁸⁶ Liberty, however, did not seek an injunction, only a declaration of its rights under the Kentucky act.⁸⁷ The Supreme Court held that the federal courts had no jurisdiction over the action because there was no Article III case or controversy.⁸⁸

First, the Court found that the parties were not in an adversarial posture because Commonwealth Attorney Grannis *as an individual* was not adverse to Liberty because he had not threatened Liberty.⁸⁹ The Court recognized the fact that Liberty sued Grannis in a representational capacity,⁹⁰ but the Court seemed to ignore the indictments against Liberty in its analysis and opinion.⁹¹ Second, Liberty did not present the case in a “regular” form wherein a judgment would enforce rights or redress or punish wrongs.⁹² The Court broadly held that federal courts could not proceed under the Kentucky Declaratory Judgment Act because it provided a form of proceeding that violated Article III of the U.S. Constitution.⁹³

Michael B. Mushlin, *The Trojan Horse: How the Declaratory Judgment Act Created a Cause of Action and Expanded Federal Jurisdiction While the Supreme Court Wasn't Looking*, 36 UCLA L. REV. 529, 566-67 (1989); *see also* S. Rep. No. 1005 (1934).

⁸⁴ *Liberty*, 273 U.S. at 72.

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.* at 73.

⁸⁸ *Id.* at 76.

⁸⁹ *Id.* at 73. It is not clear why the Court pointed to Grannis in an individual capacity. BORCHARD, *supra* note 13, at 176.

⁹⁰ *Id.* at 72.

⁹¹ Doernberg & Mushlin, *supra* note 83, at 558 n.131 (citing Hearings on H.R. 5623 Before a Subcomm. of the Senate Comm. on the Judiciary, 70th Cong., 1st Sess., at 2-9 (1928)). Professor Borchard appeared before the Subcommittee of the Senate Committee on the Judiciary in 1928, testifying that Professor Borchard's investigation revealed that the State Attorney General had indicted Liberty Warehouse, but the Court did not seem to take this fact into account. *Id.*

⁹² *Liberty*, 273 U.S. at 74.

⁹³ *Id.* The question whether a federal court could proceed under the Kentucky Declaratory Judgment Act was an issue because of the Federal Conformity Statute, R. S. § 914. *Id.* According to a summary of the Federal Conformity Statute found in

Professor Edwin Borchard found the Supreme Court's prior treatment of cases with parties seeking injunctions particularly insightful when analyzing *Liberty*.⁹⁴ Only two weeks⁹⁵ before hearing arguments in *Liberty*, the Court ruled in *Village of Euclid, Ohio v. Ambler Realty Co.* that the mere existence and maintenance of an ordinance constituted a present invasion of property rights which was sufficient to establish jurisdiction.⁹⁶ Likewise, in *Pierce v. Society of Sisters*, the Court ruled that a statute was enough of a threat to the plaintiff to establish jurisdiction, even though the plaintiff filed the complaint more than two years before the statute was to go into effect.⁹⁷ Professor Borchard opines that had Liberty Warehouse filed

S. Pac. Co. v. Denton, 146 U.S. 202, 208 (1892), federal district and circuit courts were to follow the "practice, pleading, and forms" of the state where the district or circuit court was located. Thus, under the Federal Conformity Statute prior to the Supreme Court's ruling in *Liberty*, the federal district court in Kentucky was to follow the Kentucky Declaratory Judgment Act.

The Supreme Court in *Liberty* described the Kentucky declaratory judgment statute as providing "in any action in a court of record of the Commonwealth having general jurisdiction wherein it is made to appear that *an actual controversy exists*, the plaintiff may, by means of a petition on the laws or equity side of the court, as the nature of the case may require, ask for and obtain 'a declaration of rights, either alone or with other relief; and the court may make a binding declaration of rights, whether or not consequential relief is or could be asked;' and that further relief, based on such declaratory judgment, may be granted by the court whenever necessary or proper, either in the same proceeding or in an independent action, upon notice to any adverse party whose rights have been adjudicated by the declaratory judgment." *Liberty*, 273 U.S. at 71. (Emphasis added)

⁹⁴ BORCHARD, *supra* note 13, at 177.

⁹⁵ The Supreme Court heard *Liberty* on December 7, 1926, *Liberty*, 273 U.S. at 70, and decided *Village of Euclid, Ohio v. Ambler Realty Co.*, 272 U.S. 365 (1926) on November 22, 1926, a difference of about two weeks. The Court decided *Liberty* on January 3, 1927. *Liberty*, 273 U.S. at 70.

⁹⁶ *Vill. of Euclid, Ohio*, 272 U.S. at 386. In *Village of Euclid*, Euclid had adopted an extensive zoning scheme to the detriment of a property owned by Ambler Realty. *Id.* at 379-80. The zoning ordinance had the potential of reducing Ambler Realty's property value by \$100 per frontage foot. *Id.* at 384. Ambler did not seek a building permit, nor did it seek a zoning exception under the ordinance. *Id.* at 386. Ambler sued Euclid seeking an injunction preventing enforcement of the statute. *Id.* at 384. Euclid made a motion to dismiss the case as premature, but the trial court denied the motion. *Id.* at 386. The Supreme Court ruled that the trial court properly denied the motion because the existence of the statute alone was enough of a threat to establish jurisdiction. *Id.*

⁹⁷ *Pierce v. Soc'y of Sisters*, 268 U. S. 510, 535 (1926). In *Pierce*, the state of Oregon passed a statute essentially requiring all children to attend public schools. *Id.* at 530. The statute passed in 1922, and was to go into effect in September 1926. *Id.* The Society of Sisters, who operated a private school, sued the state for an injunction barring enforcement of the statute, naming Governor Pierce and others as

its case as an action seeking an injunction against enforcement of the Kentucky statute instead of seeking a declaratory judgment, the Court would not have complained of jurisdiction.⁹⁸ In an action for injunction, the presence of the Kentucky statute regulating the sale of leaf tobacco should have been enough of a threat of irreparable injury to Liberty to establish jurisdiction for an injunction because the statute was directly applicable to Liberty, and because Commonwealth Attorney Grannis had authority to enforce the statute.⁹⁹

Liberty left the constitutionality of declaratory judgment actions unclear because the Court's analysis was not clear about why the Court objected to declaratory judgments. While it was possible that the *Liberty* Court merely objected to the lack of federal statutory authority to hear declaratory judgments,¹⁰⁰ the broad "denunciatory"¹⁰¹ language in *Liberty* made it equally possible that the Supreme Court majority believed that declaratory judgments necessarily were advisory opinions violating Article III.

Doubts about whether declaratory judgments were constitutional continued after the Court's opinion¹⁰² in *Willing v. Chicago Auditorium Ass'n*.¹⁰³ In *Willing*, the plaintiff, the Chicago Auditorium Association, was a lessee that wanted to tear down an old building that the Association leased in order to construct a modern building.¹⁰⁴ While the lessee believed that the lease supported its plans, one of the lessors, *Willing*, did not agree.¹⁰⁵ In "an informal, friendly, private conversation," *Willing* asserted that the lessee could

representatives of the state. *Id.* at 532. The state of Oregon moved to dismiss the complaint as premature, as the plaintiff filed the complaint more than two years before the statute was to go into effect. Brief of Appellant at 4a, *Pierce*, 268 U.S. 510, No. 583 (October Term, 1924). The Supreme Court stated that "[t]he injury to appellees was present and very real, not a mere possibility in the remote future. If no relief had been possible prior to the effective date of the Act, the injury would have become irreparable. Prevention of impending injury by unlawful action is a well recognized function of courts of equity." *Pierce*, 268 U.S. at 536.

⁹⁸ BORCHARD, *supra* note 13, at 178.

⁹⁹ *Id.*

¹⁰⁰ See *Willing v. Chi. Auditorium Ass'n*, 277 U.S. 274, 290 (1928) (Stone, J., concurring).

¹⁰¹ Doernberg & Mushlin, *supra* note 83, at 568 (citing the testimony of Charles Taft, Hearings on H.R. 5623 Before a Subcomm. of the Senate Comm. on the Judiciary, 70th Cong., 1st Sess., at 7 (1928)).

¹⁰² *Id.* at 558.

¹⁰³ *Willing*, 277 U.S. at 274.

¹⁰⁴ *Id.* at 285.

¹⁰⁵ *Id.* at 285-86.

not tear down the building.¹⁰⁶ Consequently, the lessee's financiers were fearful that the lessee's plans would violate the lease and had second thoughts about financing the project.¹⁰⁷ The lessee sued to remove the cloud caused by Willing's opposition from its leasehold interest and for an injunction barring the lessors from opposing the project.¹⁰⁸ The Court dismissed the case for lack of jurisdiction, holding that the Judicial Act did not authorize the proceeding.¹⁰⁹

The Court ruled that there was no evidence that the lessors had opposed the project or claimed a right amounting to a cloud on title.¹¹⁰ The Court reasoned that the action was not a cloud on title case at all because the lessors had not hampered the lessee's present use and occupancy of the property, and there were no hostile acts or threats to form an adverse assertion of right.¹¹¹ Instead, the Court stated the plaintiff sought "simply a declaratory judgment," which the Court asserted was beyond the power of the federal courts.¹¹²

While the Court held that the proceeding did not fall within the scope of the Judicial Code,¹¹³ the Court also ruled that the case was not justiciable under Article III.¹¹⁴ As in *Liberty*, the Court's constitutional analysis in *Willing* was not clear about why the action was not an Article III case or controversy. The Court acknowledged that the case had nearly every element of a genuine controversy: the question before the court was not moot or administrative, would fall under familiar forms of equity, and was capable of final judgment.¹¹⁵ The plaintiff's interests were definite, specific, and not abstract, and the parties' interests were adverse.¹¹⁶ However, the Court seemed to reason that the proceeding did not involve an Article III case or

¹⁰⁶ *Id.* at 286.

¹⁰⁷ *Id.* at 287.

¹⁰⁸ *Id.* at 287-88.

¹⁰⁹ *Id.* at 289-90.

¹¹⁰ *Id.* at 288. A cloud on title action fell under the equity jurisdiction of federal courts when the plaintiff was in possession of property having a clear title, and when the defendant claimed a right or title that was clearly invalid or inequitable. *Chi. Auditorium Ass'n v. Cramer*, 8 F.2d 998, 1005-06 (N.D.Ill 1925). Under equity principles, mere oral claims of ownership were generally insufficient to obtain equity jurisdiction. *Id.*

¹¹¹ *Willing*, 277 U.S. at 288.

¹¹² *Id.* at 289. The Court cited *Liberty*, in support of this assertion, but did not clarify whether the lack of jurisdictional authority was statutory or constitutional. *Id.*

¹¹³ *Id.* at 290.

¹¹⁴ *Id.* at 289-90.

¹¹⁵ *Id.* at 289.

¹¹⁶ *Id.*

controversy because the plaintiff's doubts and fears could not confer a cause of action, and because the defendant had neither wronged nor threatened the plaintiff.¹¹⁷

Justice Stone's concurring opinion in *Willing*¹¹⁸ appears to be a turning point in resolving the declaratory judgment's murky constitutional position. Justice Stone did not agree with the majority's broad constitutional analysis in *Willing*.¹¹⁹ Instead, Justice Stone asserted that the Court could simply resolve *Willing* by observing that there was no statutory authority to hear the case.¹²⁰

The Supreme Court largely resolved the question of whether declaratory judgments were unconstitutional¹²¹ in *Nashville, Chattanooga & St. Louis Railway v. Wallace* in 1933.¹²² In *Nashville*, the Supreme Court characterized a declaratory judgment as a procedure, not a substantive form of relief.¹²³ The Court reasoned that because the declaratory judgment was merely a procedure, a federal court would have jurisdiction over a declaratory judgment if the issues constituted a justiciable case or controversy raised in an action for injunction or other procedural form of relief.¹²⁴

B. Declaratory Judgments Must Involve a Case or Controversy

The Declaratory Judgment Act of 1934 emphasized the Article III case or controversy requirement by limiting the Act's scope to

¹¹⁷ *Id.* at 289-90.

¹¹⁸ *Id.* at 290 (Stone, J., concurring).

¹¹⁹ *Id.* at 290-91 (Stone, J., concurring).

¹²⁰ *Id.* at 290 (Stone, J., concurring).

¹²¹ S. Rep. No. 73-1005 (2d Sess. 1934), reprinted in BORCHARD, *supra* note 13, at 1047.

¹²² *Nashville, Chattanooga & St. Louis Ry. v. Wallace*, 288 U.S. 249, 259-65 (1933). In *Nashville*, the railroad sued the Comptroller of the Treasury of Tennessee seeking a declaratory judgment that a Tennessee tax on fuel storage was unconstitutional. *Id.* at 258. The railroad stored fuel in Tennessee to power trains on interstate routes through Tennessee, Kentucky, Alabama, and Georgia. *Id.* at 265. Tennessee imposed a tax on the fuel, the state had demanded payment of the taxes, and the state had threatened to enforce the tax. *Id.* at 262. The court ruled that the issue raised was unquestionably a case or controversy because the railroad could have sued to enjoin collection of the tax instead of to obtain a declaratory judgment. *Id.* at 261.

¹²³ *Id.* at 264.

¹²⁴ *Id.* at 262 (the Court summarized the "narrow question" presented in *Nashville* as whether a controversy that is justiciable when raised in a suit for an injunction is also justiciable when presented as a declaratory judgment).

actual controversies.¹²⁵ However, there is no universal definition for a constitutional case or controversy.¹²⁶ The text of the U.S. Constitution does not clearly define what the Framers meant by the words “cases” and “controversies.”¹²⁷ The fact that the Constitution enumerates several types of cases and controversies reveals that the Framers at least discussed forms of cases and controversies falling within federal jurisdiction.¹²⁸ But it does not appear that the Framers specifically debated the underlying meaning of cases and controversies.¹²⁹

During the Constitutional Convention, James Madison argued that federal court jurisdiction should be limited to matters of a judiciary nature.¹³⁰ Madison asserted that it was “generally supposed that the jurisdiction given was constructively limited to cases of a Judiciary Nature.”¹³¹ Madison made this comment during a debate over judicial review of legislation.¹³² Judicial review was a controversial subject, invoking debate during and after the Constitutional Convention.¹³³ The context of Madison’s comment

¹²⁵ LARRY W. YACKLE, *RECLAIMING THE FEDERAL COURTS* 110 (Harvard Univ. Press, 1994).

¹²⁶ *Id.* at 75-76.

¹²⁷ U.S. CONST., art. III, § 2, cl. 1.

¹²⁸ 4 *THE FOUNDERS’ CONSTITUTION* 220-27 (Philip B. Kurland & Ralph Lerner, eds., The Univ. of Chic. Press, 1987). The Framers debated proposals granting power to hear cases involving piracies and felonies on the high seas (May 29, 1787), cases relating to the collection of national revenue, questions of national peace and harmony, impeachment of national officers, and others including those that remained in the final draft of the Constitution (July 18, 1787). *Id.* at 220-22.

¹²⁹ Cass R. Sunstein, *What’s Standing after Lujan? Of Citizen Suits, “Injuries,” and Article III*, 91 MICH. L. REV. 163, 173 (1992) (“There is relatively little explicit material on the Framers’ conception of “case of controversy.”); Gene R. Nichol, Jr., *Justice Scalia, Standing, and Public Law Litigation*, 42 DUKE L.J. 1141, 1150 (1993) (“[T]he Framers gave almost no indication of what the phrase meant.” (referring to “case or controversy”)); YACKLE, *supra* note 125, at 76 (“As best anyone can tell, very little was said at the Constitutional Convention about the circumstances in which federal courts might act.”).

¹³⁰ Ralph A. Rossum, *The Courts and the Judicial Power*, in *THE FRAMING AND RATIFICATION OF THE CONSTITUTION* 235-36 (Leonard W. Levy & Dennis J. Mahoney eds., Macmillan Publishers Co. 1987) (Debate on August 27, 1787).

¹³¹ *Id.* at 236 (citing James Madison, *Remarks on Mr. Jefferson’s Draft of a Constitution* in 5 *THE WRITINGS OF JAMES MADISON* 294 (Galliard Hunt ed., 1900-1910)).

¹³² Rossum, *supra* note 130, at 236. Madison’s comment came during a debate over whether the judiciary should have jurisdiction over all cases arising under the Constitution. *Id.* Madison was opposed to giving one branch more authority to mark out the limits of the Constitution. *Id.*

¹³³ The exchange of writings between Alexander Hamilton in *The Federalist* #78-81 and Anti-Federalist Brutus in the *New York Journal* regarding the judiciary and

regarding judiciary nature may suggest that Madison was only expressing his opinion that review of legislation was not among matters of a judiciary nature.¹³⁴

Professor Raoul Berger interpreted Madison's reference to "cases of a Judiciary Nature" to mean the judicial practices known and used prior to the framing of the Constitution.¹³⁵ Would declaratory judgments have been matters of a judicial nature at the time of the framing of the Constitution? Analogs to declaratory judgments have existed for centuries, dating to Roman law.¹³⁶ The judicial practice in the U.S. at the time of the framing of the Constitution largely reflected that in England.¹³⁷ At that time, matters of a judiciary nature in America included actions in law and in equity.¹³⁸ State courts rendered judgments that were essentially declaratory in cases of questions of status, quieting title and other equitable actions.¹³⁹ It would be difficult to argue that the Framers were unaware of such actions, but it is not clear whether the Framers would have considered such actions justiciable in federal court.

The Supreme Court's first opportunity to interpret the meaning of a case or controversy under the Declaratory Judgment Act was in *Aetna Life Insurance Co. v. Haworth* in 1937.¹⁴⁰ In *Aetna*, the declaratory plaintiff, Aetna Life Insurance Company, sought a declaration that insurance policies were void for nonpayment of premiums, and that Aetna was not obliged to pay disability payments

judicial review further emphasized how controversial the subject was. Rossum, *supra* note 130, at 239. In Brutus' 15th essay of March 20, 1788, Brutus recognized that the federal courts would have the power of judicial review, and was concerned that the federal courts held too much power. *Id.* Hamilton responded in the *Federalist Papers #78-81*, outlining the reasons for and benefits of an independent judiciary. *Id.*

¹³⁴ Raoul Berger, *Standing to Sue in Public Actions: Is it a Constitutional Requirement?*, 78 YALE L.J. 816, 829 (1968-1969).

¹³⁵ *Id.* at 816-17.

¹³⁶ BORCHARD, *supra* note 13, at 87.

¹³⁷ Berger, *supra* note 134, at 816; William T. Quillen & Michael Hanrahan, *A Short History of the Delaware Court of Chancery 1792-1992*, 18 DEL. J. CORP. L. 819, 824 (1993).

¹³⁸ Quillen & Hanrahan, *supra* note 137 at 822-24.

¹³⁹ 1 WALTER H. ANDERSON, ACTIONS FOR DECLARATORY JUDGMENT § 3, 14 (2d ed., The Harrison Co. 1951); BORCHARD, *supra* note 13, at 148. Borchard distinguishes matters such as divorce, partition, forfeiture, etc. as not declaratory because they do not merely declare the prior existence of a right but establish new rights. *Id.* at 139.

¹⁴⁰ *Aetna Life Ins. Co. v. Haworth*, 300 U.S. 227, 239-41 (1937).

under the policy.¹⁴¹ In the events leading up to the suit, declaratory defendant, Haworth, purchased five policies from Aetna for life and disability coverage.¹⁴² If Haworth suffered a disability while covered under the policies, Haworth could stop making payments and collect the benefit.¹⁴³ Haworth allegedly experienced a disability in 1930 and stopped making payments.¹⁴⁴ Subsequently, Haworth sent a written claim to Aetna asserting the disability and asserting that Haworth did not owe premium payments because of the disability.¹⁴⁵ Haworth did not make any threats to Aetna, nor did he sue Aetna.¹⁴⁶ However, Haworth had a cause of action against Aetna for payment of disability benefits,¹⁴⁷ and the statute of limitations for an action on the policies would not lapse until ten years after his death.¹⁴⁸ Aetna sued Haworth seeking a declaratory judgment that the policies were void for nonpayment.¹⁴⁹ The district court granted Haworth's motion to dismiss for lack of a controversy.¹⁵⁰ The Eighth Circuit majority affirmed the district court's dismissal after the Eighth Circuit reasoned that the facts did not show that Haworth was presently invading any of Aetna's rights, nor were Aetna's rights imminently affected by Haworth.¹⁵¹ The Eighth Circuit held that there was no justiciable controversy in the absence of a defendant invading or threatening to invade a plaintiff's rights.¹⁵² The Supreme Court reversed.¹⁵³

The Court defined actual controversies under the Declaratory Judgment Act to be those controversies that Article III permitted the federal courts to hear.¹⁵⁴ Consequently, the Court held that a justiciable controversy must be definite and concrete, as opposed to hypothetical or abstract.¹⁵⁵ The Court held that a controversy must be "real and substantial," affect the legal interests or relationships of

¹⁴¹ *Id.* at 239.

¹⁴² *Id.* at 237.

¹⁴³ *Id.*

¹⁴⁴ *Id.*

¹⁴⁵ *Id.* at 237-38.

¹⁴⁶ *Aetna Life Ins. Co. v. Haworth*, 84 F.2d 695, 698 (8th Cir. 1936), *rev'd*, 300 U.S. 227 (1937).

¹⁴⁷ *Aetna*, 300 U.S. at 243.

¹⁴⁸ *Aetna*, 84 F.2d at 699 (Woodrough, J., dissenting).

¹⁴⁹ *Aetna*, 300 U.S. at 239.

¹⁵⁰ *Id.* at 236.

¹⁵¹ *Aetna*, 84 F.2d at 698.

¹⁵² *Id.* at 697.

¹⁵³ *Aetna*, 300 U.S. at 244.

¹⁵⁴ *Id.* at 239-40.

¹⁵⁵ *Id.* at 240.

adverse parties, and must be one capable of resolution by a conclusive judgment.¹⁵⁶ The Court reasoned that there was a controversy in *Aetna* because Aetna and Haworth had taken adverse positions, each claiming a present right.¹⁵⁷ The parties' rights turned on questions of fact, and a judicial determination would be conclusive.¹⁵⁸ The Court recognized that had Haworth brought the action, there would have been a justiciable controversy.¹⁵⁹ The Court stated that the character of the controversy is the same regardless of whether Aetna or Haworth brought the action.¹⁶⁰ The Court reasoned that "[i]t is the nature of the controversy, not the method of its presentation *or the particular party who presents it*, that is determinative."¹⁶¹

The *Aetna* Court did not directly impose a requirement that the defendant's actions be an invasion of rights, or that such invasion of rights be imminent.¹⁶² Instead, the Court appears to have focused on the adverse positions of Aetna and Haworth in reaching its holding.¹⁶³ It is notable that the Supreme Court's opinion did not include any analysis or acknowledgment of the Eighth Circuit's rationale.¹⁶⁴

The Supreme Court later summarized the *Aetna* analysis in *Maryland Casualty Co. v. Pacific Coal and Oil Co.*¹⁶⁵ The Court reasoned that "[t]he question in each case is whether the facts alleged, under all the circumstances, show that there is a substantial controversy, between the parties having adverse legal interests, of sufficient immediacy and reality to warrant the issuance of a declaratory judgment."¹⁶⁶

¹⁵⁶ *Id.* at 241 (a declaratory judgment must be a "real and substantial controversy admitting of specific relief through a decree of a conclusive character, as distinguished from an opinion advising what the law would be upon a hypothetical state of facts").

¹⁵⁷ *Id.* at 242.

¹⁵⁸ *Id.*

¹⁵⁹ *Id.* at 243-44. Haworth could have sued in equity for a determination that the repudiation of the insurance contracts was unjustified because of his disability. *Id.* at 244.

¹⁶⁰ *Id.*

¹⁶¹ *Id.* (Emphasis added).

¹⁶² *See id.* at 240-41.

¹⁶³ *Id.* at 242.

¹⁶⁴ *See Aetna*, 300 U.S. at 239-44.

¹⁶⁵ *Maryland Cas. Co. v. Pac. Coal & Oil Co.*, 312 U.S. 270 (1941).

¹⁶⁶ *Id.* at 273 (*summarizing Aetna v. Haworth*, 300 U.S. 227 (1937)).

C. Development of Patent Declaratory Judgments in the Circuits

A patent does not convey a right to make, use, offer to sell, or sell.¹⁶⁷ Instead, a patent owner enforces a patent by excluding others from making, using, offering to sell, selling or importing the claimed invention.¹⁶⁸ Consequently, a patent owner does not assert rights under the patent until the owner takes steps to enforce the patent.¹⁶⁹ Some courts¹⁷⁰ and commentators¹⁷¹ have applied this principle to assert that a patent is not a cloud on a potential infringer until the patent owner exercises his right to exclude others. Under this line of reasoning, the patent owner would not be in a position adverse to the potential infringer until the patent owner takes steps to enforce the patent.¹⁷²

Commentator Edmund H. O'Brien similarly analyzed the controversy requirement in patent declaratory judgment cases in 1935.¹⁷³ Mr. O'Brien drew an analogy between the lessors in the cloud on title action, presented in *Willing v. Chicago Auditorium Ass'n*, and patent owners in a patent infringement declaratory judgment action.¹⁷⁴ He emphasized the Court's ruling that the *Willing* lessor's opinion that the lessee's plans violated the lease was not an adverse claim of right creating a cloud on title.¹⁷⁵ By analogy, Mr. O'Brien suggested that a patent owner's opinion that a potential infringer's actions infringed a patent likewise would not create an adverse claim of right.¹⁷⁶ With this rationale, Mr. O'Brien argued that an adverse claim of right would only arise when the patent owner moved to exert its right to exclude others by demanding that infringement cease or by threatening to sue.¹⁷⁷ Supporting this

¹⁶⁷ *Prima Tek II, L.L.C. v. A-Roo Co.*, 222 F.3d 1372, 1379 (Fed. Cir. 2000).

¹⁶⁸ 35 U.S.C. §§ 271, 281 (2004).

¹⁶⁹ Edmund H. O'Brien, *Restrictions on the Usefulness of Declaratory Judgments in Patent Suits*, 17 J. PAT. OFF. SOC'Y 270, 278 (1935).

¹⁷⁰ *Teva Pharm. USA, Inc. v. Pfizer Inc.*, 395 F.3d 1324, 1333 (Fed. Cir. 2005) (“[M]ore is required for an actual controversy than the existence of an adversely held patent...”); *Tremond Co. v. Schering Corp.*, 122 F.2d 702, 706 (3d Cir. 1941) (“[T]he mere existence of the patent is not a cloud on title...”).

¹⁷¹ BORCHARD, *supra* note 13, at 807 (Professor Borchard asserted that “the mere existence of the patent is not a cloud on title.”); O'Brien, *supra* note 169, at 278-79.

¹⁷² O'Brien, *supra* note 169, at 278.

¹⁷³ *Id.*

¹⁷⁴ *Id.* at 278-79

¹⁷⁵ *Id.* at 278.

¹⁷⁶ *Id.* at 278-79.

¹⁷⁷ *Id.* at 279.

conclusion was the *Willing* Court's denial of a cause of action because the defendants had not threatened or wronged the plaintiffs.¹⁷⁸

The early patent infringement declaratory judgments considered by federal courts coupled two elements: manufacture or sale of a potentially infringing product and a charge of infringement or threat by the patent owner.¹⁷⁹ In 1941, the Third Circuit considered the requirement for an actual controversy in patent declaratory judgments in *Tremond Co. v. Schering Corp.*¹⁸⁰ In *Tremond*, the declaratory defendant, Schering Corporation, held a patent for certain chemicals.¹⁸¹ Schering contacted several customers of the declaratory plaintiff, Tremond, and then put an advertisement in a trade journal asserting that any use of the chemicals without Schering's consent would be a violation of Schering's patent.¹⁸² Responding to the advertisement, Tremond sued Schering for a declaratory judgment that Schering's patent was invalid or not infringed.¹⁸³ The district court dismissed for lack of a controversy,¹⁸⁴ and the Third Circuit reversed.¹⁸⁵

The *Tremond* court held that there was a justiciable controversy on the facts of the case. The court cited Mr. O'Brien's analysis when asserting that "[t]here can be no doubt" that there is not a controversy before the patent owner makes a charge of infringement.¹⁸⁶ However, while the Third Circuit required a charge

¹⁷⁸ *Willing*, 277 U.S. at 288.

¹⁷⁹ BORCHARD, *supra* note 13, at 807; P. J. Federico, *Operation of the Federal Declaratory Judgment Act in Patent Cases*, 19 J. PAT. OFF. SOC'Y 489, 500 (1937). As one example, *Zenie Brothers v. Miskend*, was an early patent declaratory judgment action under the Declaratory Judgment Act. 10 F.Supp. 779, 782 (S.D.N.Y. 1935). In *Zenie Bros.*, the defendant Miskend had recently obtained a patent for a garment seam that the plaintiff Zenie Brothers had been using for many years. *Id.* at 780. Subsequently, Miskend threatened to sue Zenie Brothers and their customers for patent infringement. *Id.* After being threatened, Zenie Brothers sought a declaratory judgment that the patent was invalid. Miskend moved to dismiss the complaint for failing to state a claim. *Id.* The *Zenie Bros.* court denied the motion to dismiss, reasoning that the case presented an adversary proceeding, was an actual controversy, and would provide finality of judgment. *Id.* at 780-81.

¹⁸⁰ 122 F.2d 702, 705 (3d Cir. 1941).

¹⁸¹ *Id.* at 703. Schering owned U.S. Patent No. 2,096,744, Hildebrandt, et al., *Hydrogenation Products of Follicle Hormones and Methods of Producing Same* (issued Oct. 26, 1937).

¹⁸² *Tremond*, 122 F.2d at 703.

¹⁸³ *Id.*

¹⁸⁴ *Id.*

¹⁸⁵ *Id.* at 706.

¹⁸⁶ *Id.* at 705 (citing Edmund H. O'Brien, *Restrictions on the Usefulness of*

of infringement, the charge did not have to be formal, nor did the patent owner have to charge the declaratory plaintiff directly.¹⁸⁷ The court found Schering's advertisement to be a threat of lawsuit, forming a sufficient indirect charge of patent infringement against Tremond.¹⁸⁸

Several circuits discussed the threshold for a controversy through the late 1960's and 1970's, although none delved into the foundations beneath the charge of infringement requirement.¹⁸⁹ By 1982, most¹⁹⁰ circuits had adopted a threat or reasonable apprehension of lawsuit or a charge of infringement requirement to show the presence of a controversy.¹⁹¹ As one exception, the Ninth Circuit

Declaratory Judgments in Patent Suits, 17 J. PAT. OFF. SOC'Y 270, 278 (1935)).

¹⁸⁷ *Tremond*, 122 F.2d at 705.

¹⁸⁸ *Id.*

¹⁸⁹ *See eg.*, *Super Prods. Corp. v. D P Way Corp.*, 546 F.2d 748, 753 (7th Cir. 1976); *Sherwood Med. Indus., Inc. v. Deknatel, Inc.*, 512 F.2d 724, 727-28 (8th Cir. 1975); *Sweetheart Plastics, Inc. v. Illinois Tool Works, Inc.*, 439 F.2d 871, 874 (1st Cir. 1971); *Muller v. Olin Mathieson Chem. Corp.*, 404 F.2d 501, 504 (2d Cir. 1968).

¹⁹⁰ I found no appellate cases that definitively hold that a charge of infringement is sufficient or necessary in patent cases in the Fourth, Fifth, Tenth, and D.C. Circuits. *See eg.*, *U.S. Galvanizing & Plating Equip. Corp. v. Hanson-Van Winkle-Munning Co.*, 104 F.2d 856, 860 (4th Cir. 1939) (the Fourth Circuit applied a generic *Aetna Life Ins. Co. v. Haworth* analysis here, but there was a charge of infringement cementing the controversy); *Dahlgren Mfg. Co. v. Harris Corp.*, 399 F.Supp. 1253, 1254-56 (N.D.Tex. 1975) (a controversy existed without a direct charge of infringement when a controversy between the parties was sufficiently substantive and immediate); *Acme Feed Mills, Inc. v. Quaker Oats Co.*, 313 F.Supp. 1156, 1158 (M.D.N.C. 1970) (dismissing declaratory judgment for lack of controversy when there was no charge of infringement in trademark case); *Fash v. Clayton*, 78 F.Supp. 359, 361 (D.N.M. 1948) (a controversy does not exist unless the declaratory defendant threatens to sue).

The Ninth Circuit adopted a reasonable apprehension of liability test. *Societe de Conditionnement en Aluminium v. Hunter Engineering Co., Inc.*, 655 F.2d 938, 944 (9th Cir. 1981) (adopting a reasonable apprehension of liability test, *see infra* notes 191-201).

¹⁹¹ *See, eg.*, *Int'l Harvester Co. v. Deere & Co.*, 623 F.2d 1207, 1210 (7th Cir. 1980) (a controversy exists when there is a reasonable apprehension of lawsuit, either by an express charge of infringement or apprehension based on defendant's conduct); *Sherwood Med. Indus., Inc. v. Deknatel, Inc.*, 512 F.2d 724, 727-28 (8th Cir. 1975) (an actual controversy exists when the patent owner makes a charge of infringement, but the charge of infringement can be implied by conduct that would lead a reasonable man to believe that he or his customers face an infringement suit); *Robin Prods. Co. v. Tomecek*, 465 F.2d 1193, 1195-96 (6th Cir. 1972) (whether a reasonable man would regard the patent owner's course of action as a charge of infringement or threat of suit); *Sweetheart Plastics, Inc. v. Illinois Tool Works, Inc.*, 439 F.2d 871, 874 (1st Cir. 1971) (required a charge of infringement, but the charge

examined and rejected a threat of lawsuit requirement in *Societe de Conditionnement en Aluminium v. Hunter Engineering Co., Inc.* in 1981.¹⁹²

In *Societe de Conditionnement en Aluminium*, an employee of Hunter Engineering Company called a Hunter customer who was also a customer of Societe de Conditionnement en Aluminium (SCAL), and the Hunter employee threatened to sue this customer for patent infringement if the customer bought machinery from SCAL.¹⁹³ The Hunter employee did not have any authority from Hunter to make the threat, but neither the customer nor SCAL were aware of this.¹⁹⁴ The customer subsequently bought the machinery from SCAL, and SCAL sued Hunter seeking a declaratory judgment for patent invalidity.¹⁹⁵ When SCAL sued, Hunter repudiated the unauthorized threat.¹⁹⁶ Even though Hunter repudiated its threat, the Ninth Circuit held that SCAL made a prima facie case showing that there was a justiciable controversy.¹⁹⁷

The Ninth Circuit acknowledged the presence of the threat of lawsuit test, but dismissed it because the threshold was much too high for a constitutional controversy.¹⁹⁸ According to this court, the better way to characterize a controversy was by a real and reasonable

of infringement requirement is a flexible one; a charge of infringement may be found in a reasonable apprehension of lawsuit); *Muller v. Olin Mathieson Chem. Corp.*, 404 F.2d 501, 504 (2d Cir. 1968) (required a threat of lawsuit or charge of infringement, with a charge of infringement given liberal interpretation); *Treemond Co. v. Schering Corp.*, 122 F.2d 702, 705 (3d Cir. 1941) (“[t]here can be no doubt” that there is not a controversy before the patent owner makes a charge of infringement); *Tubeco, Inc. v. Crippen Pipe Fabrication Corp.*, 402 F.Supp. 838, 844 (E.D.N.Y. 1975) (a controversy exists when the plaintiff has a reasonable apprehension of lawsuit caused by the defendant); *Japan Gas Lighter Ass’n v. Ronson Corp.*, 257 F.Supp. 219, 237 (D.N.J. 1966) (a declaratory judgment controversy must be based on a reasonable apprehension that the plaintiff faces an infringement suit if he continues to conduct the activity in issue); *E.W. Bliss Co. v. Cold Metal Prods. Co.*, 137 F.Supp. 676, 678 (N.D. Ohio 1955) (a controversy exists when the patent owner directly or indirectly fosters the plaintiff’s reasonable apprehension of lawsuit).

E.W. Bliss is the earliest published reasonable apprehension of lawsuit case that I have found, and *Japan Gas Lighter* appears to be the second.

¹⁹² *Societe de Conditionnement en Aluminium v. Hunter Eng’g Co.*, 655 F.2d 938, 943 (9th Cir. 1981).

¹⁹³ *Id.* at 941.

¹⁹⁴ *Id.*

¹⁹⁵ *Id.* at 938, 941.

¹⁹⁶ *Id.*

¹⁹⁷ *Id.* at 946.

¹⁹⁸ *Id.* at 944.

apprehension of liability if the declaratory plaintiff continued its conduct.¹⁹⁹ The court reasoned that in a reasonable apprehension of liability test, the focus is on the potential infringer, not the patent owner.²⁰⁰ The court held that SCAL had made a prima facie case of jurisdiction because it was reasonable for the listener to believe that the employee of the patent owner had authority to make its threats, and thus there was a reasonable apprehension of liability.²⁰¹

The Ninth Circuit was alone in its reasonable apprehension of liability test for patent cases, and because the Ninth Circuit adopted it in 1981, the test as applied to patent cases was short lived. The Federal Circuit assumed jurisdiction over appeals from district court patent cases in 1982,²⁰² and adopted the threat of lawsuit requirement.²⁰³

The first Federal Circuit case considering the requirements for a constitutional controversy in a declaratory judgment action was *C.R. Bard, Inc. v. Schwartz*.²⁰⁴ The declaratory plaintiff, C.R. Bard, and inventor, Boris Schwartz, entered into an agreement licensing Schwartz's intravenous catheter patent.²⁰⁵ Over the next ten years, C.R. Bard manufactured catheters according to the invention, and paid royalties to Schwartz.²⁰⁶ However, in 1982 Schwartz sued C.R. Bard in a New Jersey state court for failure to use best efforts and failure to pay royalties.²⁰⁷ C.R. Bard subsequently stopped making royalty payments and sued Schwartz in federal court seeking declaratory judgment that the patent was invalid and unenforceable.²⁰⁸ The district court dismissed the declaratory judgment action on the ground that there was no controversy because Schwartz had not terminated the license agreement.²⁰⁹ The Federal Circuit reversed, holding that Schwartz did not have to terminate the license in order for C.R. Bard to bring a declaratory judgment action.²¹⁰

¹⁹⁹ *Id.*

²⁰⁰ *Id.* at 945.

²⁰¹ *Id.* at 946.

²⁰² 28 U.S.C. § 1295(a)(1) (2004) (enacted under the Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25 (1982)).

²⁰³ *C.R. Bard, Inc. v. Schwartz*, 716 F.2d 874, 879 (Fed. Cir. 1983).

²⁰⁴ *Id.* at 879.

²⁰⁵ *Id.* at 875. (C.R. Bard licensed U.S. Patent No. 3,599,637 to Schwartz, *Intravenous Catheter Assembly* (issued Aug. 17, 1971)).

²⁰⁶ *Id.*

²⁰⁷ *Id.*

²⁰⁸ *Id.* at 876.

²⁰⁹ *Id.*

²¹⁰ *Id.* at 882.

The *C.R. Bard* court defined a constitutional controversy as one where there is a reasonable threat that the patent owner will sue for patent infringement.²¹¹ The court recognized that there was a split among the circuits over whether a licensee could seek a declaratory judgment before a licensor terminated the license.²¹² However, the court rejected the view that there could never be a reasonable apprehension of lawsuit while the license was in effect.²¹³ Because *C.R. Bard* had breached the license by stopping royalty payments, he had a reasonable apprehension that Schwartz would sue for patent infringement.²¹⁴

Ever since *C.R. Bard*, the Federal Circuit has applied the apprehension of lawsuit test.²¹⁵ While the court asserts that a constitutional controversy cannot exist without a reasonable apprehension of lawsuit,²¹⁶ the Federal Circuit seldom expressly links the reasonable apprehension test with standing.²¹⁷ However, it is probable that the Federal Circuit considers the reasonable apprehension test as a proxy for standing.²¹⁸

IV. FEDERAL COURT STANDING

A plaintiff in federal court must have standing.²¹⁹ Under the modern standing doctrine,²²⁰ the party seeking federal jurisdiction

²¹¹ *Id.* at 879 (a controversy exists when “there is a reasonable threat that the patentee or licensor will bring an infringement suit against the alleged infringer”).

²¹² *Id.*

²¹³ *Id.* at 880.

²¹⁴ *Id.* at 881.

²¹⁵ *See, e.g.*, *Jervis B. Webb Co. v. Southern Sys. Inc.*, 742 F.2d 1388, 1398-99 (Fed. Cir. 1984); *Arrowhead Indus. Water, Inc. v. Ecolchem, Inc.*, 846 F.2d 731, 736 (Fed. Cir. 1988); *B.P. Chem. Ltd. v. Union Carbide Corp.*, 4 F.3d 975, 978 (Fed. Cir. 1995); *Teva Pharm. USA, Inc. v. Pfizer Inc.*, 395 F.3d 1324, 1332 (Fed. Cir. 2005); *Medimmune, Inc. v. Genentech, Inc.*, 427 F.3d 958, 964-65 (Fed. Cir. 2005).

²¹⁶ *Medimmune, Inc. v. Centocor, Inc.*, 409 F.3d 1376, 1379 (Fed. Cir. 2005).

²¹⁷ The cases explicitly linking the reasonable apprehension of lawsuit to standing are: *B.P. Chemicals*, 4 F.3d at 981 (a declaratory judgment action is justiciable when a plaintiff meets the elements of standing); *Medimmune*, 427 F.3d at 965 (“*Medimmune*, since under no threat or apprehension of suit, did not have standing to bring a declaratory” judgment action); *Teva*, 405 F.3d at 992 (Gajarsa, J., dissenting) (a declaratory judgment action is justiciable when a plaintiff meets the elements of standing).

²¹⁸ *See B.P. Chemicals*, 4 F.3d at 981.

²¹⁹ *Valley Forge Christian Coll. v. Ams. United for Separation of Church & State, Inc.*, 454 U.S. 464, 475-76 (1982).

²²⁰ The modern doctrine of standing is a late-twentieth century development.

must establish standing in every federal case.²²¹ In a declaratory judgment action, the declaratory plaintiff has the burden of establishing the elements of standing.²²²

Standing includes both constitutional requirements and prudential considerations.²²³ Prudential considerations are judicially imposed limitations, such as a requirement that a plaintiff's grievance be within the zone of interest protected by the law under which the plaintiff is suing.²²⁴ Constitutional standing, however, is "an essential and unchanging part of the case-or-controversy requirement" of the Constitution.²²⁵ The Supreme Court has repeatedly held that constitutional standing determines whether there is a case or controversy within the meaning of Article III.²²⁶ A party without constitutional standing may not sue in federal court.²²⁷

The Supreme Court's requirements for constitutional standing include three elements at an "irreducible constitutional minimum."²²⁸ First, there must be an injury in fact.²²⁹ Second, there must be a traceable causal connection between the defendant's actions and the plaintiff's injury.²³⁰ And third, the injury must be conclusively redressable by the court.²³¹ These elements are the core of the Article III case or controversy requirement.²³² By applying the standing doctrine, courts are able to distinguish a case or controversy from an advisory opinion.²³³

Cass R. Sunstein, *What's Standing after Lujan? of Citizen Suits, "Injuries," and Article III*, 91 MICH. L. REV. 163, 169 (1992). By 1992, 117 Supreme Court cases discussed standing in terms of Article III, and 109 of the 117 cases were decided after 1965. *Id.* The first Supreme Court case to discuss standing in terms of Article III was *Stark v. Wickard*, 321 U.S. 288 (1944). The Court decided *Aetna Life Ins. Co. v. Haworth* in 1937, before *Stark v. Wickard*. See *Aetna*, 300 U.S. 227 (1937).

²²¹ *Elk Grove Unified Sch. Dist. v. Newdow*, 542 U.S. 1, 7 (2004).

²²² See *id.* (The party bringing the action must establish standing.)

²²³ *Id.*

²²⁴ *Id.*

²²⁵ *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992).

²²⁶ See, e.g., *Elk Grove Unified Sch. Dist.*, 542 U.S. at 7; *Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 102 (1998); *Lujan*, 504 U.S. at 560; *Allen v. Wright*, 468 U.S. 737, 751 (1984); *Valley Forge Christian Coll.*, 454 U.S. at 472.

²²⁷ *Valley Forge Christian Coll.*, 454 U.S. at 475-76.

²²⁸ *Lujan*, 504 U.S. at 560.

²²⁹ *Id.*

²³⁰ *Id.*

²³¹ *Id.* at 561.

²³² *Id.* at 560.

²³³ *Steel Co.*, 523 U.S. at 102 (standing "is a part of the common understating of what it takes to make a justiciable case"); Gene R. Nichol, Jr., *Ripeness and the*

In a declaratory judgment action brought by a potential infringer, the plaintiff should readily satisfy the redressability element of standing.²³⁴ If the declaratory judgment holds that the patent is valid and infringed, the infringer must cease their conduct. If the patent is invalid or not infringed, the declaratory plaintiff may continue to conduct business. In either case, a judgment settles the question.

The injury in fact analysis is more difficult in patent declaratory judgments. When does a potential infringer have an injury in fact? Under a constitutional standing analysis, the injury in fact element is satisfied when a plaintiff has suffered or will imminently suffer a violation of a legally protected right; a right that is specific, not abstract or hypothetical.²³⁵ In 1992, the Supreme Court reaffirmed this definition of injury in fact in *Lujan v. Defenders of Wildlife*.²³⁶

In *Lujan*, the Secretary of the Interior had eliminated a requirement that federal agencies issue reports of the effects agency projects have on endangered species in foreign countries.²³⁷ The plaintiffs alleged that if federal agencies did not analyze and report the impact of their projects on endangered species, certain endangered species would reach extinction sooner.²³⁸ The plaintiffs sued the Secretary of the Interior over the Secretary's failure to enforce the Endangered Species Act.²³⁹ The plaintiffs argued that the government caused them injury because they would not be able to return to Sri Lanka and Egypt to see animals affected by federal projects after they became extinct.²⁴⁰ Further, the plaintiffs argued they had standing because the Endangered Species Act contained a "citizen-suit" provision which allowed "any person" to sue to enjoin violations of the Act.²⁴¹ The Court held the plaintiffs did not have standing to sue because there was no injury in fact.²⁴² Further, even if there was injury, the Court could not redress such an injury.²⁴³ A judgment

Constitution, 54 U. CHI. L. REV. 153, 155 (1987).

²³⁴ See *Teva Pharm. USA, Inc. v. Pfizer Inc.*, 395 F.3d 1324, 1343 (Fed. Cir. 2005) (Mayer, dissenting) (a declaratory judgment would have resolved the entire controversy between the parties).

²³⁵ *Lujan*, 504 U.S. at 560.

²³⁶ *Id.*

²³⁷ *Id.* at 558-59.

²³⁸ *Id.* at 562.

²³⁹ *Id.* at 558-59.

²⁴⁰ *Id.* at 563-64.

²⁴¹ *Id.* at 571-72.

²⁴² *Id.* at 564.

²⁴³ *Id.* at 568.

would not bind the funding agencies because they were not parties to the suit, and there was no evidence that a judgment would ultimately affect the government projects that were allegedly harming these animals.²⁴⁴ The Court also held that a statute which provides a procedure for citizens to sue does not confer standing in the absence of constitutional standing.²⁴⁵

The Court reaffirmed the requirements for constitutional standing to include injury in fact, causation, and redressability.²⁴⁶ Next, the Court recognized that while wanting to see endangered animals was “undeniably” a cognizable interest,²⁴⁷ the plaintiffs had not shown that any injury to this interest was imminent.²⁴⁸ The *Lujan* Court then distinguished between cases involving actual harm and those where harm had not yet occurred.²⁴⁹ The Court asserted that when there is actual harm, the “existence of standing is clear.”²⁵⁰ However, when the injury has not yet occurred, the plaintiff must show that the injury will occur imminently.²⁵¹

The *Lujan* majority noted that immanency is an “elastic concept,”²⁵² but asserted that in a case of future injury, the threatened injury must be “certainly impending” to be an injury in fact.²⁵³ The Court suggested that if the plaintiffs had made concrete plans for trips to Sri Lanka and Egypt, or had identified when the injury would occur, there might have been an injury in fact.²⁵⁴ However, even if the plaintiffs had purchased tickets for a future trip, it is not clear whether they would have had standing. The Court noted that injuries which are too speculative would not pass the imminent injury rule.²⁵⁵

An injury generally must be concrete and particularized.²⁵⁶ A plaintiff that claims a generalized grievance will not normally have standing in federal court.²⁵⁷ The plaintiff must have suffered a

²⁴⁴ *Id.* at 569-71.

²⁴⁵ *Id.* at 576-77.

²⁴⁶ *Id.* at 560-61.

²⁴⁷ *Id.* at 562.

²⁴⁸ *Id.* at 564.

²⁴⁹ *Id.* at 564-65 n. 2.

²⁵⁰ *Id.*

²⁵¹ *Id.*

²⁵² *Id.*

²⁵³ *Id.* (citing *Whitmore v. Arkansas*, 495 U.S. 149, 158 (1990)).

²⁵⁴ *Id.* at 564.

²⁵⁵ *Id.* at 564 n. 2.

²⁵⁶ *Id.* at 560.

²⁵⁷ *Id.* at 573-74. Standing for claims of generalized grievances has been denied by the Supreme Court for both Constitutional and prudential reasons. *FEC v. Akins*,

particular harm distinct from harm common to the general population.²⁵⁸

The Federal Circuit held that in patent cases, a particularized harm suffered by a declaratory plaintiff must be more than merely “the existence of an adversely held patent.”²⁵⁹ The mere existence of a patent may resemble a generalized grievance when the declaratory plaintiff’s injury mirrors the public interest of keeping invalid patents from interfering with competition generally,²⁶⁰ because such an interest is somewhat abstract and indefinite.²⁶¹ However, when the declaratory plaintiff is a manufacturer that is creating or planning to create a product that may infringe a patent, the declaratory plaintiff’s injury is distinguishable from the generalized grievance. The potentially infringing manufacturer faces a particularized harm because the manufacturer would be accruing potential damages with every product made.

*A. Reasonable Apprehension of Lawsuit is Not Coextensive
With Constitutional Standing*

When a patent owner makes a charge of infringement, it necessarily raises a controversy by causing an injury in fact.²⁶² A charge of infringement from the patent owner essentially creates the same type of controversy as in an ordinary patent infringement case, where a patent owner makes a charge in a complaint and a potential infringer refutes that charge.²⁶³ The Federal Circuit reasons that a

524 U.S. 11, 23 (1998). A generalized grievance lacks Constitutional standing when the generalized grievance pertains to an abstract injury, “for example, injury to the interest in seeing that the law is obeyed.” *Id.* at 24.

²⁵⁸ *Lujan*, 504 U.S. at 575. However, the mere fact that many people suffer the same concrete and particularized injury (appearing to be a generalized grievance) does not defeat standing. *Akins*, 524 U.S. at 24.

²⁵⁹ *Teva Pharm. USA, Inc. v. Pfizer, Inc.*, 395 F.3d 1324, 1333 (Fed. Cir. 2005).

²⁶⁰ *See Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 816 (1945) (“The far-reaching social and economic consequences of a patent, therefore, give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope.”).

²⁶¹ *See FEC v. Akins*, 524 U.S. 11, 23 (1998).

²⁶² *Cardinal Chem. Co. v. Morton Int’l Inc.*, 508 U.S. 83, 96 (1993) (“[T]here is, necessarily a case or controversy” when the patent owner makes a charge of infringement. (Emphasis in original)).

²⁶³ P. J. Federico, *Operation of the Federal Declaratory Judgment Act in Patent Cases*, 19 J. PAT. OFF. SOC’Y 489, 499 (1937). In an ordinary patent infringement case, the patent owner charges a potential infringer with infringement, and

charge of infringement is justiciable because the charge of infringement creates a reasonable apprehension of lawsuit.²⁶⁴

One problem with the Federal Circuit's reasonable apprehension test as a sole measure of a constitutional controversy is that it is an incomplete replacement for the standing analysis. The reasonable apprehension of lawsuit test has prevented plaintiffs from presenting injuries in fact other than their reasonable apprehension of a lawsuit. It is likely that there are situations where a declaratory plaintiff will suffer an actual injury caused by the patent owner's acts or omissions, but where there is no apprehension of lawsuit.

One example is *Teva Pharm. USA, Inc. v. Pfizer Inc.* where a patent owner strategically refused to sue or threaten to sue despite the fact that the declaratory plaintiff was prepared to manufacture a potentially infringing product.²⁶⁵ In *Teva*, the Federal Circuit addressed jurisdiction over declaratory judgments in the context of U.S. Food and Drug Administration ("FDA") approval of generic drugs under the Hatch-Waxman Act.²⁶⁶

To appreciate *Teva*, it is helpful to understand part of the generic drug approval scheme. The Hatch-Waxman Act²⁶⁷ and its subsequent Medicare Amendments²⁶⁸ provide a mechanism for drug manufacturers to obtain FDA approval for generic drugs. Under one facet of the statute, a generic drug manufacturer can apply for FDA approval of a generic version of a previously approved patented drug.²⁶⁹ While a new drug application requires extensive

subsequently, the potential infringer denies infringement and challenges the validity of the patent.

²⁶⁴ *Arrowhead Indus. Water, Inc. v. Ecolochem, Inc.*, 846 F.2d 731, 736 (Fed. Cir. 1988). In *Arrowhead*, patent owner Ecolochem sent a letter to Arrowhead asserting that if Arrowhead used the Ecolochem process, Ecolochem would sue. *Id.* at 733. Arrowhead sued Ecolochem seeking a declaratory judgment that Ecolochem's patent was invalid and not infringed. *Id.* The district court dismissed the action for lack of a controversy on the ground that Ecolochem's letter was conditional. *Id.* The Federal Circuit reversed and remanded, stating that even though there was no express charge of infringement, Arrowhead had a reasonable apprehension of lawsuit. *Id.* at 737-39.

²⁶⁵ 395 F.3d at 1326-27.

²⁶⁶ *Id.* at 1327.

²⁶⁷ *Drug Price Competition and Patent Term Restoration Act of 1984*, Pub. L. No. 98-417, 98 Stat. 1585 (1984) (codified at 15 U.S.C. §§ 68, 70, 21 U.S.C. §§ 355, 360cc, and 35 U.S.C. §§ 156, 271, 282).

²⁶⁸ *Medicare Prescription Drug, Improvement, and Modernization Act of 2003*, Pub. L. No. 108-173, 117 Stat. 2066 (2003) (codified at 26 U.S.C. §§ 139, 223, 4980 and 42 U.S.C. §§ 299, 1395, 1396).

²⁶⁹ 21 U.S.C. § 355(j) (2003).

documentation showing the drug's effectiveness and safety,²⁷⁰ the generic drug application requires much less information if the active ingredient of the generic drug is the same as the previously registered drug.²⁷¹ Reduced documentation saves the generic manufacturer a significant amount of time and money.²⁷² As a further benefit, the first manufacturer to apply for FDA approval of a generic drug utilizing a particular patented active ingredient may have a six-month exclusivity period to market its generic drug.²⁷³ To enforce the six-month exclusivity period, the FDA will not approve other generic drug applications filed for that active ingredient until 180 days after the first applicant's product goes on sale, or 180 days after a court finds the patent invalid or not infringed.²⁷⁴

Merely filing a generic drug application before an original drug patent expires is an infringement of the patent.²⁷⁵ The generic drug applicant must notify the patent owner of the generic drug application as part of the application process.²⁷⁶ If the patent owner sues the generic drug applicant for patent infringement within forty-five days of receiving notice, the FDA is required to delay the application for thirty months.²⁷⁷ If the patent owner does not sue the generic drug applicant within forty-five days, the FDA may approve the generic drug application immediately.²⁷⁸ Furthermore, the generic drug applicant may then seek a declaratory judgment that the patent is invalid or not infringed by the generic drug.²⁷⁹ The availability of the declaratory judgment procedure to the generic drug applicant provides it with a practical means of preventing a subsequent suit by the patent owner after the production process has already begun.

In *Teva*, Teva Pharmaceuticals filed a generic drug application in July 2002 to produce a generic version of sertraline hydrochloride, a drug patented by Pfizer.²⁸⁰ However, Ivax Pharmaceuticals was the

²⁷⁰ 21 U.S.C. § 355(b)(1) (2003).

²⁷¹ Compare 21 U.S.C. § 355(b)(1) (2003), with 21 U.S.C. § 355(j)(2)(A) (2003).

²⁷² Henry H. Gu, *The Hatch Waxman Act and the Declaratory Judgment Action: Constitutional and Practical Implications*, 57 RUTGERS L. REV. 771, 780-81 (2005).

²⁷³ 21 U.S.C. § 355(j)(5)(B)(iv) (2003). To qualify under this provision, the first applicant must notify the patent owner of the generic drug application. 21 U.S.C. § 355(j)(5)(B)(iii) (2003).

²⁷⁴ 21 U.S.C. § 355(j)(5)(B)(iv) (2003).

²⁷⁵ 35 U.S.C. § 271(e)(2)(A) (2004).

²⁷⁶ 21 U.S.C. § 355(j)(2)(B)(i) (2003).

²⁷⁷ 21 U.S.C. § 355(j)(5)(B)(iii) (2003).

²⁷⁸ *Id.*

²⁷⁹ 35 U.S.C. § 271(e)(5) (2004).

²⁸⁰ *Teva Pharm. USA, Inc., v. Pfizer Inc.*, 395 F.3d 1324, 1326 (Fed. Cir. 2005).

first to file a generic drug application challenging Pfizer's sertraline hydrochloride patent.²⁸¹ Pfizer sued Ivax for patent infringement, and Pfizer subsequently granted a license to Ivax to settle the action.²⁸² The FDA granted a six-month exclusivity period to Ivax,²⁸³ and the FDA consequently stayed Teva's application until the Ivax product was on sale for 180 days.²⁸⁴ The Ivax license was to go into effect when Ivax started producing and selling the drug in June 2006,²⁸⁵ ensuring that its six-month exclusivity period would not expire until December 2006. This effectively stayed Teva's application until the end of Ivax's exclusivity period in December 2006, some fifty-three months after its original date of filing. Because Pfizer did not sue Teva within the forty-five day period after Teva gave Pfizer notice of the application, Teva sought a declaratory judgment on the basis of patent invalidity and non-infringement in an attempt to accelerate its FDA approval.²⁸⁶ The Federal Circuit held that the action between Pfizer and Teva did not contain a justiciable controversy, and dismissed the case for lack of jurisdiction.²⁸⁷

The *Teva* majority strictly adhered to the reasonable apprehension of lawsuit standard.²⁸⁸ Pfizer did not sue or threaten to sue, and was careful to avoid any conduct that Teva could construe as a threat.²⁸⁹ Further, it would likely be years before the FDA would approve Teva's sertraline hydrochloride application, because the FDA had stayed Teva's application to accommodate Ivax's exclusivity period.²⁹⁰ As Teva would not be able to sell the drug without FDA approval, Pfizer would not have grounds to sue Teva for infringing sales for an indeterminate amount of time.²⁹¹ Accordingly, the Federal Circuit found that there could not possibly be a reasonable apprehension of lawsuit before the FDA approved Teva's generic drug application, which was likely to be years away.²⁹² Without a reasonable apprehension of lawsuit, the court reasoned, there could not

²⁸¹ *Id.* at 1330.

²⁸² *Id.*

²⁸³ *Id.*

²⁸⁴ *Id.*

²⁸⁵ *Id.*

²⁸⁶ *Id.*

²⁸⁷ *Id.* at 1338.

²⁸⁸ *Id.* at 1332.

²⁸⁹ *Id.* at 1333.

²⁹⁰ *Id.* at 1334.

²⁹¹ *Id.*

²⁹² *Id.*

be a constitutional controversy.²⁹³

The Federal Trade Commission (“FTC”) filed a brief of amicus curiae in support of Teva.²⁹⁴ Teva and the FTC argued that the basic elements of standing, including an injury in fact caused by Pfizer’s conduct, were sufficient to create a constitutional controversy.²⁹⁵ The FTC’s brief also alleged that Pfizer’s actions caused injury by frustrating and delaying Teva’s launch of the generic drug.²⁹⁶ Because Pfizer settled the infringement action with Ivax, a court would not adjudicate the validity of the patent, ensuring that the FDA would continue to stay Teva’s application.²⁹⁷ Since Teva could not sell the drug without FDA approval, the delay completely deprived Teva of the ability to sell the drug for profit.²⁹⁸ Teva would have suffered further economic harm if its investment in research and capital equipment had been lost because of the delay in FDA approval.²⁹⁹ The FTC brief of amicus curiae cited Judge Gajarsa of the Federal Circuit as reasoning that “the inability to market a product without a court decision may create sufficient case or controversy for the purposes of a declaratory judgment action.”³⁰⁰ The Federal Circuit never acknowledged Teva’s standing argument.³⁰¹

B. Uncertainty as an Injury in Fact

Uncertainty is an important injury that the reasonable apprehension of lawsuit test ignores in patent cases.³⁰² While case law suggests that an abstract uncertainty would not be a sufficient injury in fact,³⁰³ the better rule may be that a particularized uncertainty causes a

²⁹³ *Id.* at 1338.

²⁹⁴ Brief for Federal Trade Commission as Amicus Curiae Supporting Appellant, *Teva Pharm. USA, Inc. v. Pfizer Inc.*, 395 F.3d 1324 (Fed. Cir. 2005) (No. 04-1186).

²⁹⁵ *Teva*, 395 F.3d at 1335.

²⁹⁶ Amicus Brief Supporting Appellant, *supra* note 294, at 8-9.

²⁹⁷ *Id.* at 7.

²⁹⁸ *Id.*

²⁹⁹ *See Teva*, 405 F.3d 990, 994 (Fed. Cir. 2005) (Gajarsa, J., dissenting).

³⁰⁰ Amicus Brief Supporting Appellant, *supra* note 294 at 9 (citing *Minn. Mining and Mfg. Co. v. Barr Labs., Inc.*, 289 F.3d 775, 791 (Fed. Cir. 2002) (Gajarsa, J., concurring)).

³⁰¹ *Teva Pharm. USA, Inc. v. Pfizer, Inc.*, 395 F.3d 1324, 1335-36 (Fed. Cir. 2005).

³⁰² *See* Daniel A. Farber, *Uncertainty as a Basis for Standing*, 33 HOFSTRA L. REV. 1123, 1125-26 (2005) (Uncertainty has real and immediate economic costs. Mr. Farber’s note primarily concerns environmental issues, however, his observations may appropriately apply to patent law.).

³⁰³ *See, e.g.,* *Willing v. Chi. Auditorium Ass’n.*, 277 U.S. 274, 289-90 (1928)

justiciable controversy when the uncertainty unreasonably increases the risk of harm. Consider an example of a manufacturer who is producing, or about to produce, a product when the manufacturer discovers an adverse patent. The adverse patent creates uncertainty about the manufacturer's position, causing an increase in the manufacturer's risk. If the manufacturer continues to produce the product with knowledge of the patent, the manufacturer may be at risk of paying treble damages in an infringement action by the patent owner.³⁰⁴ Worse yet, the manufacturer may face the prospect of an injunction stopping production of a profitable product or service.³⁰⁵ Because of the manufacturer's potentially infringing conduct, the adverse patent causes harm by increasing the manufacturer's risk of injury.

An increased risk of future injury has satisfied the injury in fact requirement for Article III standing in circumstances other than patent infringement.³⁰⁶ In *Baur v. Veneman*, the Second Circuit considered increased risk of harm as an injury in the context of food safety.³⁰⁷ The plaintiff, Michael Baur, sued the Secretary of Agriculture and the U.S. Department of Agriculture ("USDA") alleging a violation of the Federal Meat Inspection Act. Baur alleged that a USDA policy permitting the slaughter of downed livestock for human consumption increased his risk of contracting mad cow disease.³⁰⁸ The district court dismissed the complaint for lack of standing because Baur's exposure to meat from downed cattle caused a harm too remote to be an injury in fact.³⁰⁹ Further, the district court ruled that Baur's complaint was a grievance shared by the population as a whole.³¹⁰ The Second Circuit reversed, holding that an increased risk of disease transmission was an injury in fact sufficient to establish standing.³¹¹

("The fact that the plaintiff's desires are thwarted by its own doubts, or by the fears of others, does not confer a cause of action."); *Whitmore v. Arkansas*, 495 U.S. 149, 155 (1990) (alleged injury cannot be merely abstract).

³⁰⁴ *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 826 (Fed. Cir. 1992) (under 35 U.S.C. § 284, a court may increase a damage award up to three times for willful patent infringement).

³⁰⁵ *MercExchange, LLC v. eBay, Inc.*, 401 F.3d 1323, 1338 (Fed. Cir. 2005) (because the right to exclude is a fundamental patent right, the general rule is that a court should issue a permanent injunction after holding a patent valid and infringed).

³⁰⁶ *See Baur v. Veneman*, 352 F.3d 625, 634 (2d Cir. 2003).

³⁰⁷ *Id.*

³⁰⁸ *Id.* at 628.

³⁰⁹ *Id.* at 631.

³¹⁰ *Id.*

³¹¹ *Id.* at 633-34.

The Second Circuit reasoned that even though harm from exposure to dangerous products is probabilistic, an exposure to a risk could be an injury.³¹² The court compared Baur's asserted injury to other increased risk injuries that have garnered standing,³¹³ including increased risk of air pollution,³¹⁴ exposure to second-hand smoke,³¹⁵ and increased financial risks caused by changes to an employee benefit plan.³¹⁶ The court recognized that Baur's injury was widely shared, but reiterated that standing does not fail simply because many others

³¹² *Id.* at 634.

³¹³ *Id.* at 633-34.

³¹⁴ *LaFleur v. Whitman*, 300 F.3d 256, 270 (2d Cir. 2002). In *LeFleur*, the plaintiffs objected to the issuing of Environmental Protection Agency (EPA) permits that allowed construction of a waste treatment plant. *Id.* at 259. The planned waste facility would convert waste to ethanol, *id.*, but in the process would emit small amounts of sulfur dioxide. *Id.* at 270. The amount of sulfur dioxide emission calculated was well below the EPA allowed amount. *Id.* The company seeking the permit argued that because the amount of sulfur dioxide was below the regulated amount, the plaintiff could not have an injury. *Id.* The Second Circuit disagreed, reasoning that a possible increase in exposure to sulfur dioxide was enough to confer standing because the chemical smells like rotten eggs and might impair health. *Id.*

³¹⁵ *Helling v. McKinney*, 509 U.S. 25, 35 (1993). While this opinion did not include an analysis of the elements of standing, the Court held that risk of future harm was enough to maintain standing in an Eighth Amendment Claim. *Id.* at 35. In *Helling*, the plaintiff, McKinney, who was an inmate in a Nevada prison, sued prison officials claiming that exposure to second hand tobacco smoke from his cellmate was an unreasonable risk to health under the Eighth Amendment, and that the prison was indifferent to the plaintiff's current medical problems caused by the smoke. *Id.* at 28. The lower court concluded that the plaintiff did not have a constitutional right to a smoke-free environment, and that the plaintiff failed to prove his indifference claim. *Id.* at 28-29. The Ninth Circuit reversed the constitutional claim on the ground that the exposure endangered future health. *Id.* at 29-30. The Supreme Court agreed that the risk of damage to future health caused by exposure to smoke was sufficient to continue the Eighth Amendment claim. *Id.* at 34-35.

³¹⁶ *Johnson v. Allsteel, Inc.*, 259 F.3d 885, 888 (7th Cir. 2001). In *Allsteel*, the plaintiff, Johnson, was an employee of Allsteel. *Id.* at 887. The original benefit plan provided that Allsteel could only make amendments to the plan with agreement of the local union. *Id.* Allsteel amended the plan to give Allsteel the unilateral right to amend, interpret, construe, and administer the plan. *Id.* Johnson sued Allsteel challenging the amendments under the Employee Retirement Income Security Act. *Id.* at 886. The district court dismissed on the ground that Johnson had not suffered an injury in fact sufficient for standing. *Id.* at 886-87. The Seventh Circuit reversed. *Id.* at 891. The Seventh Circuit reasoned that when Allsteel increased its discretion in the plan, the participants in the plan incurred higher risks because it was possible for the plan to change at any time. *Id.* at 888. The court reasoned that the risk that the plan could change made the plan benefits uncertain, causing an injury in fact sufficient to confer standing. *Id.* at 890.

have the same injury.³¹⁷ However, the Second Circuit asserted that for an enhanced risk to be an injury in fact, the plaintiff must allege a credible degree of risk.³¹⁸

In some ways, a potentially infringing manufacturer may be in a position analogous to a prisoner exposed to environmental cigarette smoke. The prisoner has few practical options available to avoid a cellmate's cigarette smoke. The prisoner can try to negotiate with the cellmate, but a person addicted to smoking cigarettes may not be motivated to stop smoking for another person's wellbeing. The prisoner can request a transfer to a different cell, but is at the mercy of the jailor. Or, the prisoner can ignore the smoke and accept the risk of expensive, potentially life threatening health problems caused by the smoke. Similarly, the potentially infringing manufacturer can attempt to negotiate with a patent owner, but the patent owner may not be motivated to negotiate, especially if the patent holder is a competitor. The potentially infringing manufacturer can attempt to redesign its product or service away from the patent, but this option may be expensive or time consuming, or may be impractical or impossible due to financial, market, or technical constraints. Or, the manufacturer can ignore the patent and accept the risk of expensive litigation, and the risk of an injunction stopping its production, potentially causing an extensive loss of profits and start-up investment.

In *Helling v. McKinney*, the Supreme Court held that a prisoner subjected to a cellmate's cigarette smoke had standing to bring an Eighth Amendment claim because the risk of future harm to the prisoner was unreasonable.³¹⁹ In *Helling*, the plaintiff McKinney, who was an inmate in a Nevada prison, sued prison officials claiming that exposure to second hand tobacco smoke from his cellmate was an unreasonable risk to health under the Eighth Amendment, and that the prison was indifferent to the plaintiff's current medical problems caused by the smoke.³²⁰ The lower court concluded that the plaintiff did not have a constitutional right to a smoke-free environment.³²¹ The Ninth Circuit reversed the constitutional claim on the ground that the exposure endangered future health.³²² The Supreme Court agreed that the risk of damage to future health caused by exposure to smoke

³¹⁷ *Baur v. Veneman*, 352 F.3d 625, 635 (2d Cir. 2003) (citing *United States v. Students Challenging Regulatory Agency Procedures*, 412 U.S. 669, 687 (1973)).

³¹⁸ *Id.* at 637.

³¹⁹ 509 U.S. at 35.

³²⁰ *Id.* at 28.

³²¹ *Id.* at 28-29.

³²² *Id.* at 29.

was sufficient to bring the Eighth Amendment claim.³²³

The Supreme Court did not explicitly apply a standing argument in *Helling* when holding that McKinney had a cause of action. However, as every plaintiff must have standing to be in federal court,³²⁴ it is probable that the Court's emphasis on the unreasonable risk of future harm³²⁵ was an injury in fact analysis.

Similar to the prisoner's unreasonable risk of future harm in *Helling*, an unreasonable risk of future harm can exist in patent cases when a manufacturer creating a product discovers an adverse patent. A manufacturer who is producing or about to produce a potentially infringing product may suffer injury in several ways including delays to market, unavailability of insurance, contractual liability, and increased risks of an injunction and damages. But when does a risk of future harm rise to an unreasonable level? A reasonable apprehension of lawsuit has been the modern measure of when an adverse patent causes an unreasonable risk of an injunction and infringement damages. However, the reasonable apprehension of lawsuit should not be the exclusive measure.

A delay in bringing a product to market injures a manufacturer by causing delayed, and likely reduced, revenue.³²⁶ Further, depending on how the manufacturer responds to the delay, the manufacturer may lose its investments in start-up research and capital equipment if the product never goes to production, or product changes render equipment unusable. Teva's situation in *Teva Pharmaceuticals USA, Inc. v. Pfizer Inc.* is an example of the creation of a delay in bringing a product to market. Pfizer's refusal to act caused the FDA to delay Teva's generic drug application for an unknown number of months. Teva's delay to market was an injury in fact that should have been sufficient to confer standing.

The potentially infringing manufacturer may be injured when an adverse patent makes insurance unavailable. While a manufacturer likely has a commercial general liability insurance policy, the general liability insurance policy may not cover patent infringement.³²⁷ Even if the insurance does cover infringement, it may exclude coverage if

³²³ *Id.* at 35.

³²⁴ *Elk Grove Unified Sch. Dist. v. Newdow*, 542 U.S. 1, 11 (2004).

³²⁵ *Helling*, 509 U.S. at 33-34.

³²⁶ Armin Töpfer, *New Products- Cutting the Time to Market*, 28 No. 2 Long Range Planning 61, 63 (1995) (A ten percent delay in launch schedule leads to a twenty-five to thirty percent reduction in total project revenue.).

³²⁷ *Bank of the W. v. Superior Court*, 833 P.2d 545, 560-61 (Cal. 1992) (patent infringement not covered under infringer's commercial general liability policy).

the infringement was willful.³²⁸ The manufacturer may find that insurance is unavailable when an adverse patent is discovered, or may find that its insurance rates have increased.³²⁹ Commentator Daniel Farber asserts that it would be “silly” to deny that increased insurance rates and unavailability of insurance are injuries in fact.³³⁰

Contract liability may cause further injury to a manufacturer of a potentially infringing product. The manufacturer may have indemnified its customer from liability for patent infringement,³³¹ increasing the manufacturer’s exposure. If the manufacturer stops shipping products, the failure to deliver products may be an expensive breach of contract. Additionally, the adverse patent may put future customer contracts at risk, jeopardizing the manufacturer’s potentially significant investment made in preparing for production.

In the example of the potentially infringing manufacturer, the manufacturer does not have a generalized grievance shared by the public at large; instead, the manufacturer suffers from a particularized injury caused by uncertainty and increased risk of harm. A plaintiff who suffers economic harm caused by future risks should have standing to sue the defendant.³³²

C. Applying Reasonable Apprehension and Standing Tests

In *Aetna Life Ins. Co. v. Haworth*, the Supreme Court found a justiciable controversy because the dispute between the parties was real and substantial, affected the legal interests of adverse parties, and was capable of resolution by a conclusive judgment.³³³ Conversely, in *Medimmune, Inc. v. Genentech, Inc.*, the Federal Circuit did not find a justiciable controversy because there was no reasonable apprehension of lawsuit.³³⁴ It is interesting to consider *Aetna* and *Medimmune* under the Federal Circuit’s reasonable apprehension of lawsuit and the Supreme Court’s standing analyses.

In *Aetna*, Haworth had a cause of action to sue Aetna for

³²⁸ Melvin Simensky and Eric C. Osterberg, *The Insurance and Management of Intellectual Property Risks*, 17 CARDOZO ARTS & ENT. L.J. 321, 327, 329 (1999).

³²⁹ See *id.* at 330, 339 (The insurance company may deny insurance unless the manufacturer has opinions indicating non-infringement.).

³³⁰ Farber, *supra* note 302, at 1123.

³³¹ 48 C.F.R. § 27.203-1(a) (2005) (The federal government requires indemnification in contracts for goods or services that are also sold to the public.).

³³² See LARRY YACKLE, *FEDERAL COURTS* 302 (2d ed., 2003).

³³³ *Aetna Life Ins. Co. v. Haworth*, 300 U.S. 227, 240-41 (1937).

³³⁴ *Medimmune, Inc. v. Genentech, Inc.*, 427 F.3d 958, 964-65 (Fed. Cir. 2005).

payment of benefits, but Haworth or his wife could bring the action for an unknown number of years into the future,³³⁵ because the statute of limitations would not run until Haworth died.³³⁶ Further, Haworth did not sue or threaten to sue Aetna.³³⁷ It is apparent, then, that Aetna was not facing an imminent lawsuit because Haworth did not sue or threaten to sue,³³⁸ and it seems unreasonable to believe that Haworth could meaningfully threaten Aetna's rights without suing. If the Federal Circuit were to hear *Aetna*, the court would dismiss the case for failure to present a reasonable apprehension of lawsuit.

Aetna may also be justiciable under a modern constitutional standing analysis. Aetna would have had to keep reserves in excess of \$20,000 until it resolved the matter.³³⁹ Additionally, Aetna cited its concern that over time there could be a loss of evidence if the case was not resolved.³⁴⁰ Both the current economic harm of maintaining reserves and the enhanced risk of losing evidence caused by Haworth's failure to take legal action may be injuries in fact sufficient to support Aetna's declaratory judgment.

Significantly, *Medimmune* is justiciable under an Article III standing analysis, notwithstanding the lack of reasonable apprehension of a lawsuit. As the Supreme Court reasoned in *Altwater v. Freeman*, a licensee suffers an injury sufficient to establish standing³⁴¹ when a licensor demands royalties as a right and the licensee pays royalties under protest in a coercive situation.³⁴² Recall that *Medimmune*

³³⁵ *Aetna Life Ins. Co. v. Haworth*, 84 F.2d 695, 699 (8th Cir. 1936) (Woodrough, J., dissenting) (noting that the statute of limitations ran ten years after the insured died, and of course, it was not known at the time when Haworth would die).

³³⁶ *Id.*

³³⁷ *Id.* at 697.

³³⁸ *Teva Pharm. USA, Inc. v. Pfizer Inc.*, 405 F.3d 990, 996-97 (Fed. Cir. 2005) (Dyk, J., dissenting) (characterizing the facts in *Aetna* as a situation where Aetna was not facing an imminent risk of lawsuit.).

³³⁹ *Aetna Life Ins. Co. v. Haworth*, 300 U.S. 227, 239 (1937).

³⁴⁰ *Id.*

³⁴¹ See *Altwater v. Freeman*, 319 U.S. 359, 365 (1943) ("And certainly the requirements of case or controversy are met . . .").

³⁴² *Id.* In *Altwater v. Freeman*, an owner of a reissued patent, sued *Altwater*, a licensee under the original patent, for royalties under the reissued patent, and an injunction ordering specific performance of the license agreement. *Id.* at 360. *Altwater* filed a counterclaim seeking a declaratory judgment that the reissued patent was invalid. *Id.* The district court found that *Altwater's* product did not infringe the reissued patent, and that the license agreement was terminated. *Id.* at 362. The district court dismissed *Freeman's* claim and granted a petition to hear the declaratory judgment counterclaim. *Id.* The Eighth Circuit held that there was no controversy, and hence no jurisdiction to hear the declaratory judgment because

continued to pay license royalties because it was concerned that Genentech would terminate the license upon a breach.³⁴³ If Genentech were to terminate the license, Medimmune would risk treble damages in an infringement suit for continuing to sell Synagis®.³⁴⁴ The prospect that Genentech would terminate the license upon a breach coerced Medimmune to continue to pay royalties, which is an injury under *Altvater v. Freeman*.³⁴⁵ Allowing Medimmune to seek a declaratory judgment would not justify an advisory opinion because the case would not turn on hypothetical or abstract issues. Similarly, the definite and concrete nature of the controversy would avoid separation of powers concerns by keeping the court from delving into abstract legislative issues. *Medimmune* is an actual controversy that should be heard.

The Supreme Court recently granted Medimmune's petition for certiorari.³⁴⁶ The question presented to the Supreme Court was whether the actual controversy requirement of the Declaratory Judgment Act requires a licensee to breach its license agreement in order to seek a declaratory judgment action for patent invalidity.³⁴⁷ It does not seem possible that the Court could reach this question without addressing the Federal Circuit's reasonable apprehension test. If the Court allows Medimmune to bring its declaratory judgment action without breaching its license agreement, the Court will have to pierce the Federal Circuit's heretofore immutable³⁴⁸ reasonable apprehension of lawsuit test.

Altvater's product did not infringe and there was no license agreement. *Id.* The Supreme Court reversed, holding that a licensee suffers an injury sufficient to establish a controversy when a licensor demands royalties as a right and the licensee pays royalties under protest and in a coercive situation. *Id.* at 365.

³⁴³ See *supra* notes 19-34.

³⁴⁴ See *Medimmune*, 427 F.3d 958, 962 (Fed. Cir. 2005) (Medimmune wanted to avoid the risk and consequences of an infringement suit). A court may increase damages by three times for willful infringement. 35 U.S.C. § 284 (2003).

³⁴⁵ See *Altvater*, 319 U.S. at 365.

³⁴⁶ *Medimmune*, 427 F.3d 958 (Fed. Cir. 2005), *cert. granted*, 126 S. Ct. 1329 (U.S. Feb. 21, 2006) (No. 05-608).

³⁴⁷ *Medimmune*, 427 F.3d 958, *petition for cert. filed*, 2005 WL 3067195 (U.S. Nov. 10, 2005) (No. 05-608).

³⁴⁸ To date, there have been no patent declaratory judgment cases where the Federal Circuit has allowed an exception to the reasonable apprehension test.

V. CONCLUSION

The reasonable apprehension test is analogous to a canary in a mine. The dead-or-alive canary provides primitive feedback about air safety under certain conditions. But the canary's binary output does not provide any information about air quality in many other situations. As one example, coal miners suffer and die from the effects of silica dust exposure,³⁴⁹ a harm not detected by a canary. Likewise, the reasonable apprehension of lawsuit test is an incomplete analysis of whether there is an Article III controversy.³⁵⁰

According to the Hatch Waxman Act, courts should assert jurisdiction in generic drug declaratory judgments such as *Teva* "to the extent consistent with the Constitution."³⁵¹ While a reasonable apprehension of lawsuit test identifies one form of constitutional controversy, *Aetna* is evidence that the test is not coextensive with constitutional jurisdiction. As discussed above, *Aetna* was a justiciable controversy without any apprehension of lawsuit.³⁵² In cases like *Teva*, the difference between "the extent consistent with the Constitution" and the reasonable apprehension of lawsuit can make a substantial difference. While there was no reasonable apprehension of lawsuit in *Teva*, the court dismissed an arguably justiciable controversy, preventing *Teva* from having its injuries redressed.

To avoid the limitations of the reasonable apprehension of lawsuit test, the Federal Circuit should use a proper standing analysis. In a patent declaratory judgment action, the elements of standing are more meaningful and appropriate as a constitutional threshold than the reasonable apprehension of lawsuit test.³⁵³ As cases such as *Teva* and *Medimmune* illustrate, a reasonable apprehension of lawsuit is not the only possible injury in fact facing patent declaratory plaintiffs.³⁵⁴ The reasonable apprehension of lawsuit is one injury in fact, but it is incomplete as a sole measure of constitutional controversy. It is time

³⁴⁹ See 20 C.F.R. 718.305 (2005) (establishing a presumption that a coal miner employed for fifteen years is totally disabled or has died from pneumoconiosis upon a showing of prescribed conditions).

³⁵⁰ *Id.*

³⁵¹ 35 U.S.C. § 271(e)(5) (2004) ("[T]he courts of the United States shall, to the extent consistent with the Constitution, have subject matter jurisdiction in any action brought by such person under section 2201 of title 28 for a declaratory judgment that such patent is invalid or not infringed.") (Emphasis added)

³⁵² *Teva Pharm. USA, Inc. v. Pfizer Inc.*, 405 F.3d 990, 996-97 (Fed. Cir. 2005) (Dyk, J., dissenting).

³⁵³ See *id.* at 995 (Gajarsa, J., dissenting).

³⁵⁴ *Id.* at 994 (Gajarsa, J., dissenting).

to supplement the reasonable apprehension test with a proper standing analysis.

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TYING UP *FEIST*'S LOOSE ENDS: A PROBABILITY THEORY
OF COPYRIGHTABLE CREATIVITY

Thomas M. Byron †

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In the 1991 decision of *Feist Publications, Inc. v. Rural Telephone Service Co.*¹ ("*Feist*"), the Supreme Court held that a work must exhibit a "modicum of creativity"² to obtain copyright protection. However, the Court did not define "creativity" in its opinion, creating at least two distinct problems – one concrete and one abstract – in the

† J.D. Candidate, May 2007, Emory University School of Law; A.B. in Engineering and French, 2004, Dartmouth College; Senior Editor, Emory International Law Review. The author thanks Elise Robinson and Professor Sara Stadler for their invaluable help.

¹ 499 U.S. 340 (1991).

² *Id.* at 346.

application and conceptualization of the term “creativity.” On the concrete side, without a clear understanding of what “creativity” entails, courts have very little guidance in cases where a work’s creativity is at issue.³ To substitute for this lack of guidance, courts instead either parrot the word “creativity” as a sort of shibboleth worthy of any desired result, or center their analysis on how a modicum of creativity requires very little, if anything, of a work. Neither approach, however, yields consistency or comprehensibility.

On the abstract side, the addition of a creativity requirement has introduced a new analytical problem to copyright law. Essentially, inherent in “creativity” is a certain degree of unexpectedness or randomness in the artistic or literary work;⁴ yet, one might think that the purely rational would merit the rewards of copyright protection.⁵ In reality, copyrights ought to protect some balance of the two concepts. The problem is best understood with a view to the degree of both rationality and randomness exhibited in a work. Two simple examples paint the picture more clearly. The most rational work, the alphabetized phonebook at issue in *Feist*, for instance, does not exhibit any randomness, and, therefore, does not exhibit creativity. On the other hand, a purely random work such as the stream of numbers produced by a random number generator will likely express nothing more than chaos and will accordingly lack the rationality to convey an idea.⁶ Such works equally fail to exhibit comprehensible creativity. Between these poles, an infinite number of works depict varying levels of rationality and randomness. Therefore, the challenge in defining creativity, and the challenge left unanswered by the Supreme Court in *Feist*, is to walk “the fine line between chaos and creation”⁷ successfully.

This Comment addresses the absence of a definition of the term “creativity” by proposing a principled threshold that balances

³ See *infra* Section II.

⁴⁴ See, e.g., Ralph D. Clifford, *Random Numbers, Chaos Theory, and Cogitation: A Search for the Minimal Creativity Standard in Copyright Law*, 82 DENV. U.L. REV. 259, 274 (2004) (citing WILLIAM H. CALVIN, *THE CEREBRAL CODE* 21 (1996) (“[C]reative thoughts can be generated in a process that starts with *chance*, noise, or an error within the brain.”)) (emphasis added).

⁵ This appears to be an implicit point of Judge Roth’s dissenting opinion in *Southco Inc. v. Kanebridge Corp.*, 390 F.3d 276, 296-97 (3d Cir. 2004).

⁶ See, e.g., *Toro Co. v. R & R Prod. Co.*, 787 F.2d 1208, 1216 (8th Cir. 1986) (holding that purely “arbitrary” number assignments do not merit copyright protection).

⁷ PAUL MCCARTNEY, *CHAOS AND CREATION IN THE BACKYARD* (Capitol Records 2005).

creativity's elements of rationality and randomness. At the root of this approach is the understanding that creativity is essentially just a manifestation of probability, the mathematical field that looks to the likelihood of a certain result. With this framework in mind, this piece suggests that, as a baseline, only the work that is unlikely to be created merits copyright protection. The purely rational alphabetization of a phone book, for instance, does not merit protection because it is a highly likely result given the practical needs of the phonebook's users.

To measure the probability that a work will be created, we must understand what constrains or acts as a condition on a work's creation. The phonebook again provides a useful example. As noted above, the practical function of a phonebook requires that numbers are retrievable with minimal effort. Alphabetization, therefore, is one of only a few arrangements suitable to this purpose. In this way, the practical requirements of a phonebook highly constrain the resulting work; the typical white pages are an almost certain, and, accordingly, non-copyrighable result.

Section I of this Comment looks carefully at the fundamental requirements for copyright protection that preceded *Feist*, including the idea/expression dichotomy, the merger doctrine and its corollary *scènes à faire*, and the lower pre-*Feist* standard for copyrightability. Section II describes *Feist* before assessing the disparate academic and legal interpretations that have followed the decision. The Section concludes that *Feist's* confusing language and ambiguous holding left copyright law without clear bearing. Section III outlines the basic contours of probability before detailing the probability theory this Comment proposes as a test for determining legal "creativity." In fact, the Section contends that current legal applications of *Feist* are nothing more than a confused form of the probability theory. Sections IV-VI work through the analysis of probability over three distinct regions in a spectrum of constraint: the highly constrained work, the work of medium constraint, and the unconstrained work.

I. THE TRADITIONAL REQUIREMENTS FOR COPYRIGHT PROTECTION

Congress' power to pass laws pertaining to copyrights derives from Article I, Section 8, Clause 8 of the Constitution, the so-called "copyright-patent clause." It gives Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective

Writings and Discoveries.”⁸ Over the course of the history of copyright law, both the terms “writings” and “limited Times” have expanded dramatically.⁹ In its current form, the Copyright Act grants protection to a wide range of works, from books and songs to pantomimes, computer programs, and architectural works,¹⁰ for a period of the life of the author plus seventy years.¹¹ More specifically, these rights vest in “original works of authorship fixed in a tangible medium of expression.”¹²

As a backstop to the statutory requirements of originality and fixation, the copyright-patent clause explicitly incorporates a utilitarian theory that grounds copyright protection in a balance between private motivation and public availability. On one hand, the theory posits that without incentive to create, authors will not bother to better society with their contributions.¹³ Alternatively, if copyright law grants authors too great a monopoly over their works, they will not disseminate their works as efficiently or widely to the public.¹⁴ As the Supreme Court explained in *Twentieth Century Music Corp. v. Aiken*, “[c]reative work is to be encouraged and rewarded, but private motivation must ultimately serve the cause of promoting broad public availability of literature, music, and the other arts.”¹⁵ To the end of maximizing public benefit, copyright under the utilitarian theory attempts to limit the bundle of rights available to authors to a variety of rights more closely linked to the author’s economic interests – the copying and dissemination of works.¹⁶ Where the public interest runs counter to the author’s right to integrity in a work,¹⁷ that is, the right

⁸ U.S. CONST., art. I, § 8, cl. 8.

⁹ See Ralph S. Brown, *Eligibility for Copyright Protection: A Search for Principled Standards*, 70 MINN. L. REV. 579, 581 (1986).

¹⁰ 17 U.S.C. § 106 (2002) (listing the six classes of works worthy of copyright protection).

¹¹ 17 U.S.C. § 302(a) (1998).

¹² 17 U.S.C. § 102(a) (1990).

¹³ See, e.g., *Computer Assocs. Int’l v. Altai*, 982 F.2d 693, 696 (2d Cir. 1992).

¹⁴ *Id.*

¹⁵ *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975).

¹⁶ Brown, *supra* note 9. See also 17 U.S.C. § 106 (2000) (outlining the six different rights that U.S. copyright law protects, including rights to distribution and reproduction).

¹⁷ 17 U.S.C. § 106A (2000) embodies a somewhat underwhelming form of moral rights protection in the American utilitarian system. It reads in part:

(a) Rights of attribution and integrity. Subject to section 107 and independent of the exclusive rights provided in section 106, the author of a work of visual art--

(1) shall have the right--

(A) to claim authorship of that work, and

not to have one's work mutilated or altered, utilitarian copyright systems typically defer to the public.¹⁸

In accordance with the utilitarian theory's fear of an unduly broad monopoly, American copyright jurisprudence has long subscribed to the idea/expression dichotomy,¹⁹ which holds that ideas, unlike the expression of ideas, are not the proper subject of copyright.²⁰ In 1879, the Supreme Court in *Baker v. Selden*²¹ denied copyright protection for a set of accounting tables, the Selden System, where Selden sought protection against Baker's allegedly infringing accounting tables.²² The Court held that protection in the book did not extend to an "exclusive property in the art described therein,"²³ and that all were thus free to make use of Selden's accounting system.²⁴ Consistent with the utilitarian purpose of copyright, the Court sought to serve the public interest in dissemination of the accounting system and tables without unduly limiting Selden's (and other authors') interests in their creative output.²⁵

While *Baker v. Selden* arguably set forth "a universal point of demarcation for separating unprotectable ideas and protectable expression,"²⁶ Judge Learned Hand later added to the discussion by

(B) to prevent the use of his or her name as the author of any work of visual art which he or she did not create;

(2) shall have the right to prevent the use of his or her name as the author of the work of visual art in the event of a distortion, mutilation, or other modification of the work which would be prejudicial to his or her honor or reputation; and

(3) subject to the limitations set forth in section 113(d), shall have the right--

(A) to prevent any intentional distortion, mutilation, or other modification of that work which would be prejudicial to his or her honor or reputation, and any intentional distortion, mutilation, or modification of that work is a violation of that right, and

(B) to prevent any destruction of a work of recognized stature, and any intentional or grossly negligent destruction of that work is a violation of that right.

¹⁸ See e.g., *Computer Assocs. Int'l., Inc.*, 982 F.2d at 693. The language cited gives explicit priority to the public's interest.

¹⁹ See, e.g., *Baker v. Selden*, 101 U.S. 99 (1879).

²⁰ *Id.* If too broad an idea were granted protection, others would not be free to use that idea. For instance, if someone could copyright the idea of a comedy, the first comedy would prevent all subsequent comedic attempts.

²¹ *Id.*

²² *Id.* at 100.

²³ *Id.* at 102.

²⁴ *Id.*

²⁵ *Id.* The Court relevantly stated that protection of the Selden System outside the world of patent law "would be a surprise and fraud on the public." *Id.*

²⁶ Dale P. Olson, *The Uneasy Legacy of Baker v. Selden*, 43 S.D. L. REV. 604, 607 (1998).

describing the difficulty of precisely identifying the line between an idea and an expression. Hand's statement, set forth in *Nichols v. Universal Pictures, Corp.*²⁷ and commonly referred to as the "abstractions test,"²⁸ came in response to a dispute over the infringement of a play. While the two plays at issue shared little in the way of dialogue, characterization, or ultimate outcome, each generally involved feuding Jewish and Irish families whose children ultimately fall in love.²⁹ The determinative issue in the case was whether protection in the allegedly infringed play extended, in the absence of literal infringement, to the points of commonality between the two works. To guide this determination, Hand famously posited:

[U]pon any work..., a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the play is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected, since otherwise the playwright would prevent use of his 'ideas' to which, apart from their expression, his property is never extended.³⁰

While Hand's statement provides no clear answers as to what constitutes an unprotectable idea as opposed to protectable expression,³¹ the statement does sketch out a way of assessing the protectability of works across a spectrum of breadth – from the most specific expression chosen by the author, which merits greater protection, to the broadest idea encompassing little more than a vague movement of characters and plot elements, which merits no protection at all. In *Nichols*, Hand applied his formula to find that the elements common to the two plays at issue, fertile lovers with the same conflict of ethnicity, for instance, fell on the broad end of the spectrum, and

²⁷ 45 F.2d 119 (2d Cir. 1930).

²⁸ See, e.g., Edward Samuels, *The Idea-Expression Dichotomy in Copyright Law*, 56 TENN. L. REV. 321, 339 (1989).

²⁹ *Nichols*, 45 F.2d at 120-21.

³⁰ *Id.* at 121. According to this view, the idea/expression dichotomy is not so much a dichotomy as it is a spectrum of characterizations.

³¹ *Id.* Hand admits that fact in the opinion. "Nobody has ever been able to fix that boundary, and nobody ever can." *Id.*

accordingly did not merit copyright protection.³²

In cases where the spectrum does not offer the range that Hand described, and a work is deemed capable of few possible expressions of the work's underlying ideas, the merger doctrine precludes the work from being copyrighted. Under this doctrine, the work's idea is held to "merge" with the work's expression. For example, in *Kern River Gas Transmission Co. v. Coastal Corp.*,³³ the Fifth Circuit considered the copyrightability of a map containing the proposed path for a pipeline.³⁴ The court found that the map was not protectable because the pipeline's trajectory was already determined.³⁵ The idea of mapping the pipe, therefore, merged with the map itself through the extremely limited number of variations that the cartographer could select when depicting the soon-existent pipe.³⁶ Put in terms of Learned Hand's test, the broadest and least protectable description of the work, drafting a map, collapsed into the most specific description of the work, the actual rendering on the map itself.

The merger doctrine assumes a corollary form under the *scènes à faire*³⁷ doctrine. Like merger, *scènes à faire* is predicated on the limited number of permutations that a work may assume within its general genre. For example, in *Alexander v. Haley*,³⁸ the plaintiff brought suit against the author of the book *Roots* for the infringement of an earlier novel, *Jubilee*, which, like *Roots*, was set in the antebellum South.³⁹ The District Court for the Southern District of New York granted summary judgment for the defendant on the grounds that the elements shared between the two books were not protectable under copyright.⁴⁰ The court justified this finding by resorting to, *inter alia*, the *scènes à faire* doctrine because works

³² *Id.* at 122.

³³ 899 F.2d 1458 (5th Cir. 1990). Perhaps the most often cited merger case is *Morrisey v. Procter & Gamble*, 379 F.2d 675 (1st Cir. 1967) (denying an infringement claim in what appeared to be clear plagiarism and finding that the idea of writing a box top contest instruction merged with the actual form that the writing assumed).

³⁴ *Kern River Gas Transmission Co. v. Coastal Corp.*, 899 F.2d 1458, 1459 (5th Cir. 1990).

³⁵ *Id.* at 1463-64.

³⁶ *Id.* at 1464.

³⁷ This French phrase translates literally to "scenes to do" but could be read more imposingly as "scenes to be done."

³⁸ 460 F. Supp. 40 (S.D.N.Y. 1978). For a broader application of *scènes à faire* to a more technological domain, see the discussion of *Mitel*, *infra* Section VI.

³⁹ *Alexander*, 460 F. Supp. at 42.

⁴⁰ *Id.* at 45.

treating the topic of slavery required certain literary “incidents, characters, or settings.”⁴¹ On this count, the court noted that “[a]ttempted escapes, flights through the woods pursued by baying dogs, the sorrowful or happy singing of slaves, the atrocity of the buying and selling of human beings, and other miseries”⁴² were examples of how the idea of writing a novel about slavery merged into the actual novel itself, and as such, copyright could not extend to those elements.

Through the better part of the twentieth century, a work that successfully cleared the idea/expression and merger hurdles had only to clear the minimal additional hurdle of originality to obtain protection.⁴³ In *Bleistein v. Donaldson Lithographing Co.*,⁴⁴ Justice Holmes delivered the majority opinion upholding copyright in chromolithographic advertisements for the circus.⁴⁵ While Holmes premised this reversal of the Sixth Circuit on the general notion that judges should not deny copyright in works for lack of perceived aesthetic merit or cultural erudition,⁴⁶ he further set forth a standard for copyrightable originality: “[t]he copy is the personal reaction of an individual upon nature. Personality always contains something unique.”⁴⁷ This standard came to require that an author be the origin of a work, although anything more than plagiarism satisfied this bar.⁴⁸ Holmes’ originality standard from *Bleistein* continued in application

⁴¹ *Id.*

⁴² *Id.*

⁴³ *But see* Diane Leenheer Zimmerman, *It’s an Original! (?): In Pursuit of Copyright’s Elusive Essence*, 28 COLUM. J.L. & ARTS 187 (2005). Professor Zimmerman states that the earliest decisions of the Supreme Court leave the impression that a true “creativity” standard was in play; “copyright was intended to promote socially valuable kinds of work that also exhibited some fairly high level of human imagination or intellectual input.” *Id.* at 201. She goes on to note, however, (as this paragraph will, too) that Justice Holmes dispelled this possibility in a later opinion. *Id.* at 201-02.

⁴⁴ 188 U.S. 239 (1903).

⁴⁵ *Id.* at 248. The holding reversed both the district court, *Bleistein v. Donaldson Lithographing Co.*, 98 F. 608 (C.C.D. Ky. 1899), *aff’d*, *Courier Lithographing Co. v. Donaldson Lithographing Co.*, 104 F. 993 (6th Cir. 1900), *rev’d*, 188 U.S. 239 (1903), and the Sixth Circuit Court of Appeals, *Courier Lithographing Co. v. Donaldson Lithographing Co.*, 104 F. 993 (6th Cir. 1900), *rev’d*, *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239 (1903).

⁴⁶ *Bleistein*, 188 U.S. at 251.

⁴⁷ *Id.* at 250.

⁴⁸ Howard B. Abrams, *Originality and Creativity in Copyright Law*, 55 LAW & CONTEMP. PROBS. 3, 7 (1992).

until and beyond the Copyright Act of 1976,⁴⁹ which specifically incorporated the common law definition of originality.⁵⁰

II. *FEIST*'S NEW "CREATIVITY" STANDARD AND ITS REPERCUSSIONS

Despite variation in the test's application, the abstractions test for copyrightability under the idea/expression dichotomy and merger doctrine has remained a fixture of copyright law. In its 1991 *Feist* decision, however, the Supreme Court dramatically retooled the *Bleistein* originality standard.⁵¹ Where Holmes' standard required merely that a work's author not have slavishly copied an earlier work,⁵² Justice O'Connor, writing for the majority in *Feist*, increased this bar by adding a constitutional dimension of "creativity" to the quantum of copyrightable protectability.⁵³ As this Section notes, both scholarly and judicial commentators have struggled over the last fifteen years to pin down the exact dimensions of the creativity requirement.

Feist involved the alleged infringement of the white pages of a telephone book.⁵⁴ Rural Telephone Service Company compiled the addresses and phone numbers of residents of Northwest Kansas and published them in a phonebook.⁵⁵ Feist Publications, Inc. produced a similar phonebook that covered a larger geographical area.⁵⁶ To limit the costs of publication of its phonebook, Feist obtained licenses from other phonebook companies to use their data in the compilation.⁵⁷ Rural, however, refused this licensing.⁵⁸ In response, Feist verified many of the addresses and phone numbers in Rural's white pages, but ultimately copied some 1,309 of Rural's nearly 47,000 listings.⁵⁹ Among these listings were four fictitious names and numbers that

⁴⁹ See, e.g., *L. Batlin & Son v. Snyder*, 536 F.2d 486 (2d Cir. 1976). See also *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*, 191 F.2d 99 (2d Cir. 1951).

⁵⁰ See *Abrams*, *supra* note 48, at 7 (citing to the legislative history of the 1976 Act to this effect).

⁵¹ 499 U.S. 340.

⁵² See *Abrams* *supra* note 48. See also *Alfred Bell & Co.*, 191 F.2d at 99 (holding mezzotint copies of works of art met the copyrightable standard because the copying could only be imperfect at best).

⁵³ *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., Inc.*, 499 U.S. 340, 345 (1991).

⁵⁴ *Id.* at 342.

⁵⁵ *Id.*

⁵⁶ *Id.* at 343.

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.* at 343-44.

Rural planted to trap would-be infringing parties.⁶⁰

Justice O'Connor's opinion held that Rural's phonebooks were not worthy of copyright protection. En route to this decision, however, she imposed originality as a constitutional⁶¹ requirement for copyright protection. This conclusion came as the result of Justice Miller's two seemingly inconsistent legal statements in *The Trade-Mark Cases*.⁶² These statements were 1) facts are not worthy of copyright protection, and 2) compilations of facts are.⁶³ This distinction in copyrightability, O'Connor reasoned, owed to the originality in arrangement of the uncopyrightable facts.⁶⁴ "Originality remains the *sine qua non* of copyright."⁶⁵ To qualify for copyright protection, however, that originality also required the new element of "a minimal degree of creativity"⁶⁶ that came as a result of the author or compiler's selection.

In resetting the bar for copyright protection by including creativity, Justice O'Connor explicitly rejected any relation between the labor expended on a work and its eligibility for copyright. Copyright, she stated, "is not to reward the labor of authors, but 'to promote the Progress of Science and useful Arts.'"⁶⁷ As such, the author's expenditures in creating a compilation or other work cannot be the work's sole basis for protection.⁶⁸ This rejection explicitly overruled a line of cases invoking as justification for copyright the "sweat of the brow" doctrine, which stated that the investment of labor in collecting facts (like names, addresses, and phone numbers for a telephone book) was an adequate contribution to merit copyright protection.⁶⁹ These cases "had numerous flaws,"⁷⁰ the most glaring of which was that the doctrine extended protection to facts and ideas.

To flesh out the contours of the new standard more clearly, Justice O'Connor went on to review the requirement in compilation cases in light of the statutory definition of compilation.⁷¹ While she

⁶⁰ *Id.* at 344.

⁶¹ Congress' power to pass copyright is mentioned in Brown, *supra* note 9.

⁶² *Feist*, 499 U.S. at 344-45. See also *The Trade-Mark Cases*, 100 U.S. 82 (1879).

⁶³ *Feist*, 499 U.S. at 344-45.

⁶⁴ *Id.* at 345.

⁶⁵ *Id.*

⁶⁶ *Id.* at 348.

⁶⁷ *Id.* at 349 (quoting U.S. CONST. art I, § 8, cl. 8).

⁶⁸ *Id.*

⁶⁹ *Id.* at 352-53.

⁷⁰ *Id.* at 353.

⁷¹ The statutory definition of "compilation" reads: "a work formed by the collection and assembly of preexisting materials or of data that are selected,

recognized that this definition contained three distinct parts,⁷² O'Connor focused on the requirement that the compilation exhibit some selection, coordination, or arrangement.⁷³ This statutory language reinforced her finding in favor of creativity, and she noted that the "originality requirement is not particularly stringent."⁷⁴ She added, by way of a proof by negative, that "there remains a narrow category of works in which the creative spark is so utterly lacking or so trivial as to be virtually nonexistent."⁷⁵ By implication of the term "narrow," O'Connor seemed determined to emphasize the minimal effect that the *Feist* opinion would theoretically have on copyright law.

The specific holding that Rural's phonebook was not copyrightable added a few final touches to the new originality standard. The Rural white pages (like the white pages in every phonebook) were arranged alphabetically and contained entries for names, addresses, and phone numbers.⁷⁶ O'Connor found this arrangement did require a huge investment in gathering facts, but those facts did not "owe their origin"⁷⁷ to Rural. The compilation of these facts in alphabetical order, O'Connor added, "could not be more obvious."⁷⁸ She proceeded to designate the work "garden-variety"⁷⁹ and "devoid of even the slightest trace of creativity."⁸⁰ As a final note, she pointed out that the alphabetization of lists was an "age-old practice"⁸¹ that was "practically inevitable."⁸² Although this holding left the *Feist* originality standard largely undefined, O'Connor's language more aptly details that which is obviously *not* worthy of protection.

coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship." 17 U.S.C. § 101 (1994).

⁷² *Feist*, 499 U.S. at 357. O'Connor gave the following parsing: "The statute identifies three distinct elements and requires each to be met for a work to qualify as a copyrightable compilation: (1) the collection and assembly of pre-existing material, facts, or data; (2) the selection, coordination, or arrangement of those materials; and (3) the creation, by virtue of the particular selection, coordination, or arrangement, of an "original" work of authorship." *Id.*

⁷³ *Id.*

⁷⁴ *Id.* at 358.

⁷⁵ *Id.* at 359.

⁷⁶ *Id.* at 361-62.

⁷⁷ *Id.*

⁷⁸ *Id.* at 362.

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.* at 363.

⁸² *Id.*

Feist's ambiguous holding has resulted in widely varying interpretations. Professor Russ VerSteege found the addition of a "modicum of creativity" anathema to the purpose and legislative history of the 1976 Copyright Act⁸³ because the term "creativity" eluded any legal definition⁸⁴ and would accordingly be simply too subjective to apply. VerSteege feared judges would be "free to demand what may amount to novelty, ingenuity, imagination, or a high degree of aesthetic merit, all in the name of 'creativity.'"⁸⁵ Other commentators have keyed in on O'Connor's limited language in *Feist* in construing "creativity" as a minimal threshold.⁸⁶ Regardless of the "correct" interpretation of *Feist*, fifteen years of commentary following the case has opened a viable range of interpretation from "ingenuity or imagination" to "anything more than just the sweat of the brow."

Perhaps more importantly, *Feist*'s actual judicial application has been little more than tepid. Because most courts tend to subscribe to the lower end interpretation of *Feist*, they are left with nothing to apply. Their opinions include phrases such as "[t]he amount of creativity required for copyright protection...is decidedly small,"⁸⁷ and "the threshold of creativity is...very slight,"⁸⁸ and sweep any substantive application of *Feist* under the rug. *Feist*, therefore, has become nothing more than an oft-cited truism with little substantive force.⁸⁹ When substance is required, many courts simply proceed to

⁸³ Russ VerSteege, *Sparks in the Tinderbox: Feist, "Creativity," and the Legislative History of the 1976 Copyright Act*, 56 U. PITT. L. REV. 549, 550-55 (1995).

⁸⁴ *Id.* at 566.

⁸⁵ *Id.* at 586. The Canadian Supreme Court recently echoed VerSteege's concern when it rejected *Feist*'s standard in *CCH Canadian Ltd. v. Law Society of Upper Canada*, [2004] 1 S.C.R. 339 (Can.). There, the Court held that a work "need not be creative, in the sense of being novel or unique." *Id.* at 20. Professor Daniel Gervais has strongly disputed the Court's interpretation of *Feist*. With the help of a side-by-side linguistic comparison of *CCH* and *Feist*, Gervais sought to prove the similarities between the two cases' holdings. Gervais argues, therefore, that the Canadian Court actually accepted *Feist* but misinterpreted its language. See Daniel Gervais, *Copyright in Canada: An Update after CCH*, 203 R.I.D.A. 2 (2005).

⁸⁶ Abrams, *supra* note 48, at 43 (finding *Feist*'s mandate to be largely in accord with the earlier *Bleistein* standard and further noting that *Feist* was "anything but a wholesale attack on compilations as copyrightable works").

⁸⁷ *Lipton v. Nature Co.*, 71 F.3d 464, 470 (2d. Cir. 1995).

⁸⁸ *CMM Cable Rep. Inc. v. Ocean Coast Props., Inc.*, 97 F.3d 1504, 1516 (1st Cir. 1996).

⁸⁹ It is precisely this lack of anchoring that caused Professor VerSteege to wonder if *Feist* would just become an excuse for judges to apply their own subjective

the more traditional merger doctrine and idea/expression dichotomy.⁹⁰ In fact, one wonders whether *Feist's* leap to creativity was even necessary. The Court could have denied copyright in the phonebook as a typical merger case,⁹¹ and the judicial community would be none the worse for the wear.

The varying interpretations and the uncertain parroting of *Feist's* language are the logical result of the case's fundamentally ambiguous holding. Since the case found the phonebook insufficiently creative, the Court's language "garden variety," "obvious," and "trivial" provide guidance to what is *not* creative. This proof by negation results in no coherent line of separation, unless the standard for what *is* creative sits flush against the Court's limits as to what *is not* creative. Instead, there will necessarily remain a class of works with greater creativity than the phonebook in *Feist* which still fail to meet the *Feist* creativity requirement.

The chaotic state of the law in copyright bears out concern about the potential breadth of application of *Feist's* holding. Various classes of work garner copyright (and are deemed creative, by extension) through widely disparate filters. If a company specializes in producing fill-in insurance forms, copyright follows from the "blank forms" doctrine if the insurance form "conveys information."⁹² If a movie producer wishes to sue for protection of a short phrase in a movie, that phrase will be protected only if it is "readily recognizable"⁹³ in some courts, and "an appreciable amount of text"⁹⁴

aesthetic opinions in finding creativity. *See supra* note 84. In other words, *Feist* would be nothing more than a *post hoc* justification for potentially biased decisions.

⁹⁰ *See, e.g., CMM Cable Rep. Inc.*, 97 F.3d at 1504 (holding that the idea or method of a radio giveaway was not protectable and that promotional materials associated with that contest employed phrases whose expression effectively merged with their idea). If *Feist* is cited, it is often for the proposition that facts are not copyrightable. Yet, *Feist* did not establish this principle. *See, e.g., Harper & Row Publishers, Inc. v. Nation Enter.*, 471 U.S. 539 (1985), *Miller v. Universal City Studios, Inc.*, 650 F.2d 1365 (5th Cir. 1981) (finding the use of plaintiff's research and facts not to infringe the plaintiff's copyrightable work as such because research and facts were not copyrightable in and of themselves), and *Hoehling v. Universal City Studios, Inc.*, 618 F.2d 972 (2d Cir. 1980).

⁹¹ As far as the author is aware, such a view has not been suggested elsewhere. However, use of the merger doctrine makes sense because one phonebook is like another phonebook. A phonebook is thus composed of mere stock elements like an alphabetized list and white pages. *Cf. Alexander v. Haley*, 460 F. Supp. 40 (S.D.N.Y. 1978).

⁹² *See, e.g., Bibbero Sys., Inc. v. Colwell Sys., Inc.*, 893 F.2d 1104, 1106 (9th Cir. 1990).

⁹³ *See Murray Hill Publ'ns v. ABC Commc'ns*, 264 F.3d 622, 633 (6th Cir. 2001)

in others. If a used car company wishes to protect its pricing estimates, the company must prove that the estimates are “soft facts.”⁹⁵ If a parts company wishes to protect the serial numbering system for its product line, the company must show that the numbering was not “arbitrary,”⁹⁶ and the list goes on.⁹⁷

While each of these tests claims to determine what is creative, they are not consistent with one another. For instance, the information conveyed on a blank insurance form and the used car dealer’s “soft fact” price might not be “readily recognizable” or an “appreciable amount of text” and nevertheless, may receive copyright protection. A non-arbitrary parts numbering system might be protected even if it does not convey information or involve the creativity of a “soft fact.” The “readily recognizable” movie line might not convey anything creative and might go so far as to convey no information whatsoever. Therefore, different forms of expression receive the same copyright protection differently and have accordingly proven difficult to analyze with macroscopic consistency.⁹⁸

Because of the difficulty in analogizing cases, the holding as to the specific facts of *Feist* has proven less than helpful as well. *Feist* held, on the most basic factual level, that the simple alphabetization of a list is not copyrightable. However, very few cases will claim copyright in such a straightforward manner. The farthest reaches of *Feist*’s factual holding extend to other sequential ordering. In *Lipton v.*

(holding that use of the phrase “J.P. on J.R. in the A.M.” in a movie was not such a “readily recognizable” line). *See also* Universal City Studios, Inc. v. Kamar Indus., Inc., 217 U.S.P.Q. 1162 (S.D.Tex. 1982) (finding protection in “E.T. phone home!” and “I love you E.T”).

⁹⁴ *Alberto-Culver Co. v. Andrea Dumon, Inc.* 466 F.2d 705, 711 (7th Cir. 1972) (finding a “most personal sort of deodorant” was uncopyrightable). The vitality of this case may be somewhat in question after *Feist*.

⁹⁵ *See CCC Info. Serv., Inc. v. Maclean Hunter Mkt. Reports, Inc.*, 44 F.3d 61 (2d Cir. 1994).

⁹⁶ *See, e.g., Toro Co. v. R & R Prods. Co.*, 787 F.2d 1208 (8th Cir. 1986).

⁹⁷ *See generally* *Gates Rubber Co. v. Bando Chem. Indus., Ltd.*, 9 F.3d 823 (10th Cir. 1993) (explaining computer software is frequently held to the “abstraction-filtration-comparison test”). *See also* *Computer Assocs. Int’l., Inc. v. Altai*, 982 F.2d 693 (2d Cir. 1992); *L. Batlin & Son v. Snyder*, 536 F.2d 486 (2d Cir. 1976) (finding derivative works are copyrightable if they display a “substantial variation” over the earlier work); *and* *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*, 191 F.2d 99 (2d Cir. 1951). As this Section notes, these tests seem to track different things. The short phrase test for recognizability, for instance, seems to depend on public interest in a phrase. No other test depends on this.

⁹⁸ Additionally, several of these tests do not measure creativity with any precision.

Nature Co.,⁹⁹ for instance, the Second Circuit noted that “mechanical arrangements,” like chronological ordering of list elements, would not receive copyright protection.¹⁰⁰ Furthermore, *Feist*’s overruling of the “sweat of the brow” no longer sees much serious argument. *Feist*’s effect on copyright law thus falls squarely in line with Professor Zimmerman’s comment: “[*Feist*] neither gives us an originality standard with real teeth nor an explication of the core nub of copyright into which those teeth (were they to erupt) would be intended to bite.”¹⁰¹ The probability theory outlined in this Comment proposes a solution to *Feist*’s range of interpretations, the divergent set of tests for copyrightability, and the difficulties in analogizing copyright cases.

III. AN OUTLINE OF THE PROBABILITY THEORY OF COPYRIGHTABLE CREATIVITY

Probability is the study of the likelihood, or chance, of the occurrence of an event. Examples of probability are everywhere: the purchase of a lottery ticket comes with a small chance (or low probability)¹⁰² of hitting it big, and the trifecta¹⁰³ bet on a horse race carries a different (but also relatively small) chance of winning; in contrast, a starting hand of two aces in Texas Hold ‘Em¹⁰⁴ will generally win at least four out of five random hands. As these examples might suggest, the study of probability was born from the study of possibilities in common games.¹⁰⁵ However, probability’s modern applications extend equally to practical fields like “engineering, business, and computer science,”¹⁰⁶ and, as this

⁹⁹ 71 F.3d 464 (2d Cir. 1995).

¹⁰⁰ *Id.* at 470. *See also* *Mitel, Inc. v. Iqtel, Inc.*, 124 F.3d 1366 (10th Cir. 1997) (holding that serial number digits set out in ascending or descending order did not demonstrate adequately creative arrangement).

¹⁰¹ Zimmerman, *supra* note 43, at 209.

¹⁰² For instance, if the lottery game involves the independent selection of three balls numbered from zero to nine which must be exactly guessed, the player has a one in ten chance of picking any single ball. But taken as a whole, the player only has a $(1/10) \times (1/10) \times (1/10)$, or one in one thousand, chance of guessing all three correctly in the correct order. Typically, lottery games involve more balls with wider number ranges, so the odds of winning become much smaller.

¹⁰³ A trifecta is where the person betting attempts to pick the top three horses finishing the race in the exact order that they will finish. It will typically come with long odds, but a big payout if the bet is correct.

¹⁰⁴ Two aces as a starting hand is colloquially called “pocket aces” or “bullets.”

¹⁰⁵ RICHARD L. SCHEAFFER, *INTRODUCTION TO PROBABILITY AND ITS APPLICATIONS*, 3, 5 (Duxbury Press 1995).

¹⁰⁶ *Id.* at 1.

Comment posits, to the field of copyright law.

While a full discussion of the field of probability is not necessary to understand the probability theory set forth here, a few basic points about the study of probability are in order. First, probability tracks the likelihood of events on a scale from zero to one, where zero denotes an outcome that cannot occur and one denotes an outcome that is certain to occur.¹⁰⁷ The closer that the probability of an event is to one, the more likely it is that that event will occur. Second, a given probabilistic event has a range of possible outcomes, called a sample space.¹⁰⁸ When a coin is flipped, for example, two outcomes are possible: one of two faces of the coin will show when the coin settles. The sum of the probabilities of all possible outcomes must equal one,¹⁰⁹ meaning that it is certain that one of the outcomes will occur.¹¹⁰ Finally and importantly, the probability of an outcome is not necessarily equal to $1/(\text{the total number of outcomes})$.¹¹¹ In other words, if a bag of marbles contains three red marbles and one blue marble, the chance of drawing a blue marble is not $1/2$, even though the marble drawn has to be either blue or red; instead, the chance of drawing the blue marble will be $1/4$.

One can calculate the probability of the occurrence of multiple events, and that probability approaches zero as more events are added. If a coin is flipped two times, for example, and the heads and tails are equally likely, the chance that a heads will result on the first flip alone is one-half, and the chance that a heads will result on the second flip alone is one-half. To calculate the probability that both flips will yield heads, one multiplies the individual probabilities that a heads will occur for each individual flip, that is, $.5$ by $.5$, or $.25$; because the result of the first coin flip has no effect on the second coin flip, the coin flips are independent events.¹¹²

Not all sequential probabilistic events are independent of one another, however.¹¹³ If, for example, a bag of marbles contains two blue marbles and three red marbles, the odds of drawing a blue are $2/5$ or $.4$, and the odds of drawing a red are $3/5$ or $.6$. If a blue marble is initially drawn, one blue marble and three red marbles remain;

¹⁰⁷ *Id.* at 15.

¹⁰⁸ *Id.* at 13-14.

¹⁰⁹ *Id.*

¹¹⁰ *Id.* at 13-15.

¹¹¹ See SCHEAFFER, *supra* note 105 at 14-15. Scheaffer walks through a similar example involving a toss of two dice.

¹¹² *Id.* at 38-40.

¹¹³ *Id.* at 32-35.

accordingly, the probability of drawing a blue marble changes to 1/4 or .25, and the probability of drawing a red changes to 3/4 or .75. The new probability of drawing each marble after the blue marble is initially drawn is called a conditional probability. As its name suggests, conditional probability measures the probability of an outcome based on knowledge of another fact on which the outcome depends.¹¹⁴

In its gaming form, probability is a forward-looking mathematical field incapable of certain prediction.¹¹⁵ But because the precision of a probabilistic analysis has little to do with the actual outcome of an “event,”¹¹⁶ probability can work equally well in a rear-looking direction.¹¹⁷ In that case, a result has been observed, and the sequence of events leading to this result may be analyzed to determine whether the empirical result was a likely or unlikely outcome. For instance, if a flip of a standard coin yields a heads, both empirical and common sense-based analysis suggests that prior to this result, a coin flip would result in heads one-half of the time.¹¹⁸ The fact that a heads actually resulted does not alter the precision of the prior probability of one-half (or .5).

This rear-looking analysis is precisely what the probability theory of copyright law proposes. There must be a single, defined work at issue in any given copyright case disputing the qualification of a work for copyright.¹¹⁹ In theory, the probability of a work’s creation

¹¹⁴ *Id.*

¹¹⁵ *Id.* at 3. Scheaffer contrasts situations governed by deterministic equations. In these cases, application of equations may predict a system’s future behavior – gravity, for instance, will work at a certain rate; current will sink at a certain level given a voltage and resistance level. *See id.* at 2-3.

¹¹⁶ *See* SCHEAFFER, *supra* note 105 at 14. “Event” is the generic term of art for an occurrence measured probabilistically.

¹¹⁷ Scholars have debated the value of this type of rear-looking probabilistic analysis in the courtroom setting. *See, e.g.,* Finkelstein and Fairley, *A Bayesian Approach to Identification Evidence*, 83 HARV. L.REV. 489 (1970).

¹¹⁸ The discrepancy between a single result and the probability associated with that event is reflected in the difference between a single probabilistic event, which may only have a single outcome, and a “long-run, or limiting relative frequency,” which by its larger sample size of probabilistic events, begins to more accurately reflect the real probability of an event. *Id.* at 6-8.

¹¹⁹ The work may be viewed as an integrated whole or as individual parts, but there must be something concrete at stake. *See, e.g.,* *Acuff-Rose Music v. Jostens Inc.*, 988 F. Supp 289 (S.D.N.Y. 1997) (where the claim included only partial infringement of the refrain of a country song), *aff’d*, 155 F.3d 140 (2d Cir. 1998). A single work can exist on multiple levels, however, as the idea/expression dichotomy would hold. Each of these levels, as we shall see, is susceptible of analysis.

can be roughly valued. *In vacuo*, without regard to the work's topic or influences, however, the probability that an author would have created a given work is either incalculable or infinitesimal. This would be like guessing the outcome of the lottery without knowing what ranges of numbers are in play or guessing the roll of the dice without knowing how many sides the dice has.

Generally speaking, the precision of probability, by this token, is dependent on knowledge of the circumstances surrounding the event, and these circumstances are the very conditions that determine conditional probabilities. Critical, therefore, to a probability theory of copyright law, is an understanding of these conditions or "constraints" as they operate through a work's genesis. A copyrightable work's probability of result is only as good as knowledge of constraint on the creative process leading up to that work. Unfortunately, an easy, all-encompassing list of "constraints" defies enumeration. There are simply too wide a variety of works that potentially merit copyright protection, from plays,¹²⁰ contest instructions,¹²¹ and tourist t-shirts,¹²² to used car price estimates,¹²³ blank medical insurance forms,¹²⁴ and cable television directories.¹²⁵ As the goals and concerns of the process that goes into creating these wide-ranging works vary, it follows that there is no easy list of that which constrains the creative process in all cases.

A. What is a "Constraint?"

A well-placed case law example serves as a good starting point in forming, if not a comprehensive list of constraints, then at least a working definition of constraint as a general concept. In *Computer Associates International v. Altai, Inc.*,¹²⁶ the Second Circuit set out to create a test that defined protectable elements, even in non-literal form, through expansion of Learned Hand's abstractions test. The Second Circuit entitled the three-part test abstraction-filtration-comparison,¹²⁷ the first two parts of which are relevant here.¹²⁸ The

¹²⁰ *Nichols v. Universal Pictures, Corp.*, 45 F.2d 119 (2d Cir. 1930).

¹²¹ *Morrissey v. Procter & Gamble*, 379 F.2d 675 (1st Cir. 1967).

¹²² *Matthews v. Freedman*, 157 F.3d 25 (1st Cir. 1998).

¹²³ *CCC Info. Servs. v. Maclean Hunter Mkt. Reports, Inc.*, 44 F.3d 61 (2d Cir. 1994).

¹²⁴ *Bibbero Sys., Inc. v. Colwell Sys., Inc.*, 893 F.2d 1104 (9th Cir. 1990).

¹²⁵ *Warren Publ'g, Inc. v. Microdos Data Corp.*, 115 F.3d 1509 (11th Cir. 1997).

¹²⁶ 982 F.2d 693, 706 (2d Cir. 1992).

¹²⁷ *Id.*

first step, abstraction, merely incorporated Hand's test, which would view a work like the computer program at issue from the narrowest expression embodied in the specific code to the broadest idea that would briefly summarize the program's purpose.¹²⁹ The second step, filtration, sifted protectable from non-protectable elements of the work by evaluating, at each abstraction level, whether the work was merely an "idea," whether efficiency dictated the work, whether it constituted material taken from the public domain, or whether the work was "required by factors external to the program."¹³⁰ If the work fell into one of these categories, it would not receive protection.¹³¹ In describing the "idea" limit, the court reviewed the merger doctrine and noted how efficiency concerns could, like normal merger cases, limit coding to a few expressions.¹³² Addressing the external factors point, the court described restrictions in programming expression imposed, for example, by common usage programming techniques, industry specifications, and compatibility issues.¹³³ Finally, the court would eliminate from protection software elements which by virtue of free sharing had become part of the public domain.¹³⁴

Through the first two steps of the abstraction-filtration-comparison test, *Altai* provides an exhaustive list of constraints on the software creation process at issue. In probabilistic terms, all four of the categories mentioned serve to limit the range of possible expression for a programmer, and thereby raise the probability of the remaining

¹²⁸ The third step, comparison, is only relevant for determining whether infringement has in fact occurred. It basically compares the leftovers of the first two steps with the infringing work to see if anything protectable was appropriated. It does not, therefore, determine if and to what extent a work is protectable. *Id.* at 710. Since infringement is not part of this article's analysis, the step merits no further mention.

¹²⁹ *Id.* at 706.

¹³⁰ *Id.* at 707.

¹³¹ *Id.*

¹³² *Id.* at 707-08. The court thus seems to have collapsed the first two filtration parts listed above into a single efficiency step. The court described its efficiency-merger theory: "[E]fficiency concerns may so narrow the practical range of choice as to make only one or two forms of expression workable options." *Id.* at 708.

¹³³ *Id.* at 709-10. The Court wrote: "[A] programmer's freedom of design choice is often circumscribed by extrinsic considerations such as (1) the mechanical specifications of the computer on which a particular program is intended to run; (2) compatibility requirements of other programs with which a program is designed to operate in conjunction; (3) computer manufacturers' design standards; (4) demands of the industry being serviced; and (5) widely accepted programming practices within the computer industry." *Id.*

¹³⁴ *Id.* at 710.

choices. Although the list of constraints set forth in *Altai* is particularly well-suited to the analysis of a computer program's creation, the list also provides a good approach to general cases. No matter the case, a work will have an "idea" and might draw on public domain elements to express the idea. Furthermore, on the topic of external factors, *Altai* more expansively notes that the work in a given case should yield some clue as to what constrained the work's creation, beyond industry standards and computer programming techniques. If a literary work is non-fiction, for instance, one key external factor will be the facts underlying the account.¹³⁵ If a work is photographic in nature, the realism of the medium itself may work as an external factor in limiting expression.¹³⁶ Extrapolating *Altai*'s external factors provides the working definition of "constraint" – any factor which limits the creative process. Factors include, for example, any external limitations imposed by the work's medium, widely-practiced techniques, efficiency concerns, common scene choices, public domain elements, and the work's idea. Analysis of a work in the context of these constraints enables a rough calculation of a probability that the given work would have been created. While the calculation may not be precise on a quantitative level, it will at the very least operate within a range of likelihood, which likelihood in turn permits a judgment about the work's fitness for copyright protection.

B. The Academic and Legal Foundations of Probability Theory

As examination of *Altai* suggests, the probability theory does not grow out of a vacuum. Instead, the theory builds upon both an academic foundation – Professor Daniel Gervais' proposed test for copyrightability – and a legal foundation – the idea/expression dichotomy and the related merger doctrine. Indeed, these foundations take the first steps toward a principled analysis of copyrightable

¹³⁵ See, e.g., *Miller v. Universal City Studios, Inc.*, 650 F.2d 1365, 1368-72 (5th Cir. 1981) (finding that defendant's television miniseries did not infringe plaintiff's literary retelling of a kidnapping since the shared elements were the result of factual research).

¹³⁶ See, e.g., *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884), discussed briefly *infra* Section VI. That case held definitively that photographs were worthy of copyright protection; earlier speculation had suggested that the realism of the medium might foreclose protection altogether. *Id.* at 58-60. See also the discussion of *Bridgeman Art Library, Ltd. v. Corel Corp.*, 36 F. Supp. 2d 191, 196 (S.D.N.Y. 1999), *infra* Section IV.

creativity; the probability theory fills in the remainder.

By way of an anchoring point, the probability theory links closely to Gervais' proposed standard for copyrightable creativity. His standard "provides a way to measure creativity by measuring the quality and quantity of creative choices."¹³⁷ A "creative choice" in turn is "one made by the author that is not dictated by the function of the work, the method or technique used, or by applicable standards, or relevant 'good practice.'"¹³⁸ Gervais further notes that purely arbitrary or insignificant choice would not be creative.¹³⁹ Given the presence of creative choices, the author of the work has made something copyrightable, and the protection of the copyright will extend to these choices.

The probability theory embellishes this assessment somewhat, but remains true to Gervais' core statements. Essentially, where the author makes a creative choice within Gervais' meaning, the resulting work becomes less likely. As the author stacks creative choices serially¹⁴⁰ throughout the work, each successive choice lowers the work's overall probability by multiplication of the current probability with the probability of the given creative choice. As a work becomes less likely, with a resulting probability approaching zero, the work merits copyright protection. On the other hand, where the probability of a work's result is anywhere in the range from recognizable to exceptionally high, the work will not qualify for copyright protection. The theory transforms Gervais' test by making two additional points. First, not all variations resulting from creative choice are equally likely. Cases might exist where few variations are possible but one of the few variations is of such low probability as to merit copyright protection. Second, not all variations preserve the underlying meaning that a work seeks to convey.¹⁴¹

In the meantime, the examples that Gervais furnishes above provide a good set of empirical tests for the accuracy¹⁴² of the probability theory. His discussion of works dictated by function, technique, or any other relevant consideration illustrates means of

¹³⁷ Daniel Gervais, *Feist Goes Global: A Comparative Analysis of the Notion of Originality in Copyright Law*, 49 J. CORP. SOC'Y 949, 974 (2002).

¹³⁸ *Id.* at 976-77.

¹³⁹ *Id.* at 977.

¹⁴⁰ *See supra* note 112.

¹⁴¹ The later application of the theory to works of mid-level constraint will explain in detail the concept of meaning, defined by a form of synonymy.

¹⁴² This Comment presumes that Gervais' standard conveys an accurate view of copyrightable creativity.

refining the estimation of a work's probability. Where a functional or utilitarian constraint dictates the work, the likelihood that the work will result becomes that much higher due to the fact that any choice that the author may have confronted was one of a smaller set of choices. For instance, if the author of a digital code chooses the number "1" to designate an "on" position, that author is acting on a scientific convention wherein "1" means "on" and "0" means "off."¹⁴³ In this case, the author had few choices, if any, that would viably express the statement that a circuit was set to "on;" or under the probability theory, it was almost certain that the author would choose "1" to designate "on." Similarly, if a work grows out of a need to reproduce accurately the work of artistic masters, the truly accurate reproduction will reflect no choice.¹⁴⁴ This case, too, offers a highly likely finished product, and accordingly no basis for copyright. In each of these cases, therefore, the probability theory's finding is the same as the prospective finding under Gervais' standard.

In addition to reflections in Gervais' creativity standard, the probability theory represents an offshoot of two common copyright concepts already discussed in this Comment: the idea/expression dichotomy and the merger doctrine. As Learned Hand explained, the idea/expression dichotomy represents not a hard and fast rule of copyrightability, but a threshold that may be set at a variety of locations between pure "idea" and pure "expression."¹⁴⁵ Although this mobility does not furnish a concrete rule, it does cast copyright protection in a more meaningful light. Copyright protection, taken from the view of the telescoping idea/expression dichotomy, is not a simple binary proposition; rather, works must be viewed with an eye toward *how* copyrightable they are. It appears from Hand's test, therefore, that different works should receive different amounts of protection – from the thinnest protection in databases just clearing *Feist's* bar¹⁴⁶ to the strongest protection in a novel or play.

¹⁴³ Any textbook in digital logic will validate this convention. This example is borrowed from *Mitel, Inc. v. Iqtel, Inc.*, 124 F.3d 1366 (10th Cir. 1997), where the Tenth Circuit held that the convention nullified the copyrightability of a certain portion of the code at issue. *See infra* Section VI.

¹⁴⁴ *But see* *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*, 191 F.2d 99 (2d Cir. 1951). The probability theory agrees with the outcome, if not the exact reasoning, of this case.

¹⁴⁵ *See supra* note 30.

¹⁴⁶ *Feist* specifically refers to protection in databases as "thin." This paragraph, therefore, builds in large part off the spectrum implied by this one notion. *See generally* *Feist Publ'n, Inc. v. Tel. Serv. Co.*, 499 U.S. 340 (1991).

The merger doctrine supplements the more nuanced idea/expression dichotomy with a readily applicable test that comes into play in a relatively small number of copyright cases, those where the work's idea all but determines its expression. There is no reason, however, why the application of the merger doctrine's logic cannot be extrapolated across the spectrum of copyrightability. While there are cases where merger applies because only few variations are possible, there should equally be cases beyond the merger doctrine's scope where the greater number of potential variations on a work justifies copyright in that work.¹⁴⁷ Therein sits the heart of the probability theory - as the number of possible works increases, the probability of the original will very likely decrease, and the work will become all the more copyrightable via this expanded view of the merger doctrine.

As a starting point for application, the probability theory proposes an almost truistic statement: that across the range of copyrightable subject matter, different types of work will present different degrees of constraint. Where some works, like the example of "1" as equivalent to "on" set forth above, or the efficiently coded program in *Altai*, are the strict result of a constraint;¹⁴⁸ others will reflect a lesser degree of constraint, like a portrait artist's choices in depicting a subject;¹⁴⁹ others still will demonstrate little to no constraint, like serial numbering systems and artistic choices in the field of modern art.¹⁵⁰ In the pages that follow, this Comment will break down the spectrum of constraint into these three discrete classes and apply the theory alongside the actual holdings in cases as a measure of the theory's fit to current copyright jurisprudence.

The theory's conclusions are strikingly precise as compared to the legal outcomes, both along the margins and in the central case. Furthermore, an interesting overall image evolves. Works of mid-level constraint merit the broadest protection, but that protection decreases in both directions from the center. Hence, as the highly constrained work's scope of protection is thin or non-existent, so too is the protection of the minimally constrained work thin or non-existent.

¹⁴⁷ Gervais' theory of creative choice appears to second this notion. *See* Gervais, *supra* note 137.

¹⁴⁸ *See infra* Section IV.

¹⁴⁹ *See infra* Section V.

¹⁵⁰ *See infra* Section VI.

IV. COPYRIGHT IN CONSTRAINED WORKS: MERGER THEORY AND THE IDEA/EXPRESSION DICHOTOMY

The margin of highly constrained works serves as a good launching point for the application of the probability theory because the analysis is the least taxing. In many ways, it involves nothing more than a realistic restatement of the “0” and “1” example outlined in the above Section.

Merger doctrine cases represent perhaps the more prominent instances where constraints suffocate any creativity that a work might otherwise assume. In one such case, *Bridgeman Art Library, Ltd. v. Corel Corp. (Bridgeman)*,¹⁵¹ the plaintiff, a British art library, brought suit for infringement in its color transparencies depicting no more than simple photographic copies of works in the public domain.¹⁵² The case returned to the District Court for the Southern District of New York after a prior entry of judgment in defendant’s favor finding that plaintiff’s transparencies were not the proper subject of copyright.¹⁵³ Plaintiff was able, however, to move successfully for re-argument because of the importance of the copyright issues in the case.¹⁵⁴

After deciding that U.S. copyright law should govern the dispute between the British plaintiff and the American defendant,¹⁵⁵ the district court proceeded to evaluate the copyrightability of the transparencies under that copyright regime.¹⁵⁶ The court first observed that a leading copyright treatise would not extend copyright protection to photographs that were nothing more than “slavish” copies of other photographs.¹⁵⁷ Precedent allowed for copyright in photographs demonstrating a “distinguishable variation”¹⁵⁸ over the earlier work, thereby evincing some degree of creativity. However, the court could not accept that the transparencies at issue, which were nothing more than slavish copies, merited protection under even such a minimal requirement.¹⁵⁹ In fact, the court concluded that such creativity was completely foreclosed by the fact that the plaintiff art library aimed to

¹⁵¹ 36 F. Supp. 2d 191 (S.D.N.Y. 1999).

¹⁵² *Id.* at 192.

¹⁵³ *Id.*

¹⁵⁴ *Id.* at 192-93.

¹⁵⁵ *Id.* at 193-95. The choice of law discussion is not relevant here.

¹⁵⁶ *Id.* at 195.

¹⁵⁷ *Id.* at 196.

¹⁵⁸ The precedent cited for this proposition was *L. Batlin & Son, Inc. v. Snyder*, 536 F.2d 486 (2d Cir. 1976).

¹⁵⁹ *Bridgeman*, 36 F. Supp.2d at 196-97.

create transparencies that were, above all else, accurate reproductions.¹⁶⁰

The probability theory's analysis would comport fully with the district court's decision in *Bridgeman*. The transparencies at issue were the result of a confluence of constraints – first, the constraint inherent to photographic reproduction by the imposition of a realistic image; and second, but not entirely separate, the highly constrained objective in copying existing works of art. The copying of existing art would create a distinguishable variation if, for example, the artist were to create a collage of portions of Monet's works. However, the transparencies in *Bridgeman* admit of no such freedom. The “idea” of creating photographic, and thus true-to-life, reproductions of existing works ensured that the resulting transparencies could legitimately assume one, or at most a small handful, of forms. As such, the probability of result of the transparencies in *Bridgeman* approaches one, far too high a value to warrant copyright protection.

Described in this light, *Bridgeman* sounds much like the typical merger doctrine case. Although the court did not rely on the merger doctrine in reaching its decision, its reasoning fluidly translates to that theory. By viewing the transparencies as slavish copies, the court recognized an idea that was capable of few expressions. The court could have chosen to allow for a broader idea, but it expressly did not. Regardless of the court's final reasoning, then, the conclusion is doctrinally indistinguishable – *Bridgeman* was a merger doctrine case.

As a final note, *Bridgeman* reinforces one of *Altai*'s interesting lessons about constraints, that in nearly all cases the “idea” constraint overlaps the “external factors” constraint. In *Altai*, discussed above, the Second Circuit treated external concerns for efficiency in programming as coterminous with the idea of efficient programming.¹⁶¹ The same seems true of the constraints in *Bridgeman*. That is, the “idea” of creating slavishly copied photographic transparencies includes the notion of photographic reproduction. So where two separate constraints seemed present above, one is in fact a mere subset of the other.

With a firmer concept of what a “constraint” on a work entails, how it interacts with other constraints, and how it yields results under the probability theory, this Comment will move beyond the simplest category of analysis, the highly constrained work, to a category that is

¹⁶⁰ *Id.* at 197.

¹⁶¹ See *supra* note 126 and accompanying text.

at once more and less challenging: works evidencing a mid-level constraint.

V. COPYRIGHT IN SEMI-CONSTRAINED WORKS: UNRAVELING THE PARADOX OF EXPRESSION

Copyright's purpose is to encourage the successive building of creative expression; when spread, this progression enriches society. But this process does not and cannot move fathoms at once, and mankind often only takes small steps beyond the foundation now laid by the legacy of centuries of creativity. Most copyrightable creativity depends on this legacy as a sort of constraint on its genesis. Justice Story once thus declared, "In truth, in literature, in science and in art, there are, and can be, few, if any, things, which, in an abstract sense, are strictly new and original throughout. Every book in literature, science and art, borrows, and must necessarily borrow, and use much which was well known and used before."¹⁶² Yet such historical constraints occasioned by a serially developed legacy impose little on a work. Equally unimposing is constraint from choice of medium, language (as Story suggested) or paint or clay. Copyrightable works with constraints cabined only in influence, medium, and subject, will almost of necessity meet the probability theory's standard. If an artist chooses to paint a train's arrival in the station like Monet, any result is infinitesimal as negotiated between those constraints. Each successive brushstroke will be a separate event of limited likelihood, and the totality of brushstrokes will seem, by probabilistic analysis, a near impossibility in hindsight.

Accordingly, few, if any, copyright cases challenge the copyrightability of a semi-constrained work. While there is a long history of copyright disputes over the extent of protection that copyright might grant against infringement,¹⁶³ there are rarely any

¹⁶² Emerson v. Davies, 8 F.Cas. 615, 619 (C.C. D. Mass. 1845). He went on to say, "No man creates a new language for himself, at least if he be a wise man, in writing a book. He contents himself with the use of language already known and used and understood by others. No man writes exclusively from his own thoughts, unaided and uninstructed by the thoughts of others. The thoughts of every man are, more or less, a combination of what other men have thought and expressed, although they may be modified, exalted, or improved by his own genius or reflection." *Id.*

¹⁶³ See, e.g., Stowe v. Thomas, 23 F. Cas. 201 (C.C.E.D.Pa. 1853) (holding that Harriet Beecher Stowe's copyright in *Uncle Tom's Cabin* did not extend to the right to prepare translations) and Nichols v. Universal Pictures, Corp., 45 F.2d 119 (2d Cir 1930) (holding that one playwright's work about feuding Irish and Jewish families whose children fall in love was not protectable at the general level of shared family

grounds for disputing that an entire novel, play, or painting is entirely devoid of copyrightable expression provided that the work is not the exact copy of a pre-existing work.¹⁶⁴

Yet works of mid-level constraint pose an interesting paradox within the greater structure of copyright law. In many cases, the expression at issue is susceptible of only one recitation. Put another way, most works cannot be expressed in a form different than their actual expression without sacrificing some meaning, be it figurative or literal. This failure strongly evokes the discussion of merger theory above, and indeed in some way these creative forms of expression suffer from a form of merger, where the ideas underlying the work are inseparable from the work itself. This Section will thus have to account for a distinction – between works that are clearly expressive but guilty of merger and those works that are the result of merger but devoid of additional expression. In accounting for the distinction, this section will unravel a paradox of merger theory.

This Section's analysis relies heavily on the work of Professor Leslie Kurtz in her article, *Speaking to the Ghost: Idea and Expression in Copyright*.¹⁶⁵ Her initial observations reinforce the historical trend of the expansion of copyright protection beyond the works' text.¹⁶⁶ This trend has been justified through an equitable argument that a plagiarist should not, as Learned Hand stated, "escape by immaterial variations"¹⁶⁷ on earlier copyrighted works. Such immaterial variations would depend for their effect on a type of synonymy. There, without protection beyond the actual words on the page, the "plagiarist" would substitute the earlier author's words with words that convey essentially the same meaning and circumvent the earlier author's copyright.¹⁶⁸

Although this substitution process might be possible, Professor Kurtz detects an upper limit to its effectiveness. At a certain point, which could take effect with the very first substitution, the surrogate work will no longer mean the same thing as the first work. In Professor Kurtz's words, "[E]ach different way of saying something

feuds and fertile lovers).

¹⁶⁴ See discussion *supra* Section II (summarizing the historical standard in *Bleistein*).

¹⁶⁵ Leslie A. Kurtz, *Speaking to the Ghost: Idea and Expression in Copyright*, 47 U. MIAMI L. REV. 1221 (1992).

¹⁶⁶ *Id.* at 1226-28. Professor Kurtz cites to *Stowe* for more narrow protection and Hand's abstractions test for the expansion of that protection. *Id.*

¹⁶⁷ *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930).

¹⁶⁸ Kurtz, *supra* note 165, at 1226-28.

may amount to the saying of a different thing.”¹⁶⁹ To prove this point, Kurtz cites the Keats couplet:

O, for a draught of vintage! that hath been
Cool’d a long age in the deep delved earth¹⁷⁰

She contrasts this with an attempted paraphrase of the same line:

Oh, for a drink of wine that has been reduced in temperature
over a long period in ground with deep furrows in it.¹⁷¹

While Kurtz recognizes that the superficial meanings of the two lines might be similar, the second fails utterly to convey “the excellence of the wine, the care and time that went into its production, and the delight that drinking it is expected to give[.]”¹⁷² or in short, the same evocative meaning as the first.

In spite of the fact that the couplet cited above may seem viscerally distinct from the transparencies in *Bridgeman*, the two scenarios appear to share the important common point that each is susceptible of only one effective form. Just as the paraphrasing failed to capture the essence of the Keats couplet, so too would an out-of-focus shot of the artwork in *Bridgeman* fail to capture the essence of the originals. This similarity suggests an immediate, but rather incredible conclusion that the Keats couplet does not deserve copyright protection under the merger doctrine.

This conclusion seems wrong, and with a little analysis, proves so. Merger might be the right term to describe the Keats’ couplet, but the type of merger in *Bridgeman* is very different from the type of merger that affects Keats. Kurtz again supplies the important distinction that “Many different ideas inhere in any work, depending on how one thinks about it, and who does the thinking.”¹⁷³ In the Keats couplet those ideas include the superficial anticipation of consumption along with those less literal, evocative ideas that Kurtz noted.¹⁷⁴ For the *Bridgeman* slides, on the other hand, Kurtz’s statement misses the mark. Those transparencies are susceptible of

¹⁶⁹ *Id.* at 1228.

¹⁷⁰ *Id.* at 1229.

¹⁷¹ *Id.*

¹⁷² *Id.*

¹⁷³ *Id.* at 1234. She continues, “It is impossible to isolate a single unprotected idea within a work.” *Id.*

¹⁷⁴ *See id.* at 1229.

only one idea – to reproduce existing works of art accurately. No other interpretation is possible.

This distinction gives an idea of what “real” merger entails, and why Keats’ couplet should be worthy of copyright protection. In the *Bridgeman* case, a single, simple idea led to the creation of a single, simple work. Each level of the work, therefore, drew the creator through a certain process. For the Keats couplet, on the other hand, the idea level furnishes much more complexity. Kurtz again asserts relevantly:

The simplest ideas are uncompounded, not distinguishable into different ideas. A combination of several simple ideas can build a more complex idea. Even if individual elements of a plot or fictional character are unprotectable ideas, their combination may be subject to protection.¹⁷⁵

She continues, “A complex idea, which combines a number of simple ideas, takes from the public domain only the small area in which the simple ideas intersect . . .”¹⁷⁶ Kurtz’s latter statement sketches out a form of set theory, common to probabilistic analysis, which aptly describes the Keats couplet. That is, among the universe of ideas, Keats was able to evoke the relatively small union¹⁷⁷ of a number of ideas.

It is in this subset that the probability theory justifies copyright in Keats’ expression. As more ideas are stacked serially in expression, or alternatively, superimposed on a small space, the sequence or overlap of those ideas will successively lower the probability of the final phrase with each new addition. Thus, each of the ideas in the Keats couplet serves to lower the probability of the ultimate phrase. The final application of that subset to a succinct poetic phrase implies an exceptionally low probabilistic outcome. In spite of the high probability outcome from subset to finished expression, the single possible expression of those ideas, the earlier low probability step adequately merits copyright protection. This analysis contrasts with *Bridgeman*. The idea step in *Bridgeman* involved a single, already

¹⁷⁵ *Id.* at 1253.

¹⁷⁶ *Id.* at 1254.

¹⁷⁷ This mathematical term, symbolized U, also comes from set theory. U means the area of overlap between the named elements. ‘A U B’ would symbolize the union of the sets A and B. SCHEAFFER, *supra* note 105, at 10.

known¹⁷⁸ idea. That probabilistic step was a certainty. That certainty led to another certainty, the final transparency. By recognizing the differences in “idea” between the Keats couplet and the *Bridgeman* transparencies, therefore, a probabilistic analysis can justify the presence of copyright in one and the absence in the other.

Where an immediate conclusion suggested similarity between the *Bridgeman* slides and the Keats couplet, the ultimate conclusion could not treat them more differently. On one hand, *Bridgeman*’s almost inevitable creation merits, as the court properly found, no copyright protection of any kind. The Keats couplet, on the other hand, merits protection to the extent of its low probability step – the subset of ideas itself. In this way, works of mid-level constraint, like Keats’ couplet, retain the highest scope of protection possible. Beyond just protecting expression, copyright must, by Professor Kurtz’s reckoning, extend to ideas in their carefully subdivided corner.

VI. COPYRIGHT IN UNCONSTRAINED WORKS: OF SERIAL NUMBERS AND MODERN ART

As the preceding sections demonstrate, through the better part of the spectrum of copyrightable works, from works highly constrained by facts, idea, and medium through works like figurative art and poetry that are less constrained by the image that they illustrate or describe (but still somewhat constrained), the probability theory of copyright law falls in line with, and builds upon, standing copyright cases and academic thought. The theory begins to diverge from doctrine, however, at the outermost reaches of the spectrum. At this point, constraints on the final work are all but non-existent; cases uphold copyright in systems of serial numbers,¹⁷⁹ little more than the principled application of the sporadic output of a random number generator.

The critical distinction between a probabilistic take on serial number systems and the judicial community’s rulings thereon is in an understanding of the generally two-step process that serial number cases inhere: creation of the code and assignment of the numbers. As

¹⁷⁸ This Comment does not speculate as to the probability of expression of a single, theretofore unknown idea.

¹⁷⁹ See *Am. Dental Ass’n v. Delta Dental Plans Ass’n*, 126 F.3d 977, 979 (7th Cir. 1997). This Comment uses the term “serial numbers” generically to include any number coding system, and thus includes the slightly different technological coding performed in *Mitel, Inc. v. Iqtel, Inc.*, 124 F.3d 1366, 1368 (10th Cir. 1997).

the four primary cases¹⁸⁰ in this field demonstrate, courts struggle to liken this process to other fields in copyright law¹⁸¹ and their failure convincingly to do so demonstrates the first fundamental difference that courts have been unable to outline: where short phrases,¹⁸² examination sheets,¹⁸³ and automobile price guides¹⁸⁴ are exceptionally constrained, the selection of serial numbers to identify parts is initially a process without any constraint. The selection is a mere scattershot assignment of numbers which bear no inherent relation to the parts (or parts of parts) that they designate.¹⁸⁵ Although the application of the constrained case's result to the unconstrained case seems reasonable – both represent “cases crawling over the standard of copyrightability”¹⁸⁶ – the logic behind the constrained case is simply inapplicable to the unconstrained case.

After a chronological review of the four cases integral to this field of law in current American copyright jurisprudence, this Section analyzes why the first, seemingly adequately low probability step, the creation of the code itself, is the only truly critical anchoring point in this field. The Section will also highlight why the outcome of this low-probability case matches the outcome of the general class of high-probability cases, an equivalence driven by the faulty probability theory that judges in serial number cases frequently apply. As a result of this discussion, the Section therefore makes explicit the implied wrapping-around of the edges of the constraint spectrum of probability theory's copyright analysis. Finally, this Section will note how a probabilistic analysis of this seemingly lonely vista of copyright law, unconstrained expression, actually supplies theories applicable to modern art, a larger and more controversial area of copyright law.

¹⁸⁰ See discussion *infra*.

¹⁸¹ See discussion *infra* of *Am. Dental*, 126 F.3d at 977 and *Southco, Inc. v. Kanebridge Corp.*, 390 F.3d 276 (3d Cir. 2004) (particularly both Judge Alito's majority and Judge Roth's dissent).

¹⁸² See *Southco.*, 390 F.3d at 276.

¹⁸³ See *Educ. Testing Serv. v. Katzman*, 793 F.2d 533 (3d Cir. 1986).

¹⁸⁴ See *CCC Info. Serv. v. Maclean Hunter Mkt. Reports, Inc.*, 44 F.3d 61 (2d Cir. 1994).

¹⁸⁵ *Mitel, Inc. v. Iqtel, Inc.*, 124 F.3d 1366, 1368 (10th Cir. 1997) (“[T]wo digits of each three-digit register *arbitrarily* identify the particular function selected.”) (emphasis added). See also *id.* at 1369 (“Mitel admits that it arbitrarily selected the particular digit that represents each group of functions.”); *Toro Co. v. R & R Prods. Co.*, 787 F.2d 1208 (8th Cir. 1986) (reasoning that even in cases where the numbers follow an organization of parts or dental procedures, it is the organization that merits copyright, not the numbers beside the organization).

¹⁸⁶ Gervais, *supra* note 137.

A. *A Brief History of Serial Number Case Law*

The growth and state of copyright protection for serial numbering over the past twenty years provide a basis for probabilistic analysis under this Section. The four primary cases in this field demonstrate both inconsistencies and general misunderstandings as to whether copyright protection should extend to serial numbering systems.

In *Toro Co. v. R & R Products Co.*,¹⁸⁷ the Eighth Circuit heard Toro's appeal following the dismissal of Toro's copyright infringement claims in the district court.¹⁸⁸ Toro, a manufacturer of lawn care products and replacement parts, came into competition with R & R, a company devoted exclusively to the manufacture of replacement parts for lawn care equipment.¹⁸⁹ R & R, unlike Toro, was able to manufacture only those parts that most frequently wore out in Toro's machines, thus decreasing its overhead and undercutting Toro's prices.¹⁹⁰ To market its product, R & R distributed a catalog containing the exact serial numbers of Toro's parts preceded by the letter "R."¹⁹¹ Toro brought suit in federal district court alleging infringement in the company's parts drawings and parts numbering system.

The Eighth Circuit upheld the district court's finding that the parts numbering system was not worthy of copyright.¹⁹² The court began its analysis by noting that 17 U.S.C. § 102(b) limited 17 U.S.C. § 102(a)'s grant of protection in "any original work[] of authorship fixed in any tangible medium of expression"¹⁹³ through a statutory embodiment of the idea/expression dichotomy.¹⁹⁴ The court employed this conclusion in rejecting the district court's finding that copyright

¹⁸⁷ *Toro*, 787 F.2d 1208.

¹⁸⁸ *Id.* at 1210. The case also involved unfair competition claims at the district court level – the appeal sought the reversal of the district court's denial of a motion for J.N.O.V. on this subject. While this aspect of the case is not relevant to the discussion here, the Eighth Circuit upheld the district court's denial because "the record amply support[ed] the jury's finding of no unfair competition." *Id.* at 1216.

¹⁸⁹ *Id.* at 1210.

¹⁹⁰ *Id.*

¹⁹¹ *Id.* R & R also used Toro's trademark and attached Toro's own drawings of Toro's parts to R & R catalog entries, but explicitly disclaimed that the parts were in any way acquired from (or related to) Toro. *Id.* at 1210-11.

¹⁹² *Id.* at 1216.

¹⁹³ 17 U.S.C. § 102(a) (2006).

¹⁹⁴ *Toro*, 787 F.2d at 1211.

could not subsist in a system of serial numbers.¹⁹⁵ The Eighth Circuit read the idea/expression dichotomy as only prohibiting copyright in the “idea of using numbers to designate replacement parts.”¹⁹⁶ The court then analyzed whether Toro’s particular iteration of serial numbers constituted copyrightable expression.

On this ground, the court held that the serial numbering system could not withstand scrutiny. En route to this decision, the court rejected any potential application of the merger doctrine to the case, and noted that a given parts numbering system would theoretically be capable of a relatively large number of permutations.¹⁹⁷ The court grounded its own analysis in a pre-*Feist* creativity standard¹⁹⁸ which Toro’s system failed to meet since the system “arbitrarily assign[ed] to a particular replacement part a random number when appellant create[d] the part.”¹⁹⁹ Such purely random assignment, the court felt, conveyed no information to the reader; furthermore, the system failed to evidence any “effort or judgment” under the court’s pre-*Feist* standard.²⁰⁰ The court noted in dicta, however, that under different circumstances “a system that uses symbols in some sort of meaningful pattern, something by which one could distinguish effort or content, would be an original work.”²⁰¹

Arguably, that use of symbols in a meaningful pattern was put to the test in *American Dental Ass’n v. Delta Dental Plans Ass’n*.²⁰² There, Judge Easterbrook reversed the district court’s finding that a code of serial numbers for dental procedures was not adequately original to support a copyright.²⁰³ The case involved the American Dental Association’s creation of a *Code on Dental Procedures and Nomenclature* (hereinafter “*Code*”), which, in addition to describing current dental procedures, assigned each with a serial number.²⁰⁴ The

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ *Id.* at 1212.

¹⁹⁸ *Id.* at 1213. The court explicitly cited to a telephone compilation case, *Hutchison Tel. Co. v. Frontier Directory Co.*, 770 F.2d 128 (8th Cir. 1985), as setting out a “sweat of the brow” standard of copyrightable originality. Presumably, as *Feist* spoke directly to this, the cited case is overruled. The result of *Toro*, therefore, is telling since Toro’s parts numbering system was not even capable of copyright under the lower pre-*Feist* standard.

¹⁹⁹ *Toro*, 787 F.2d at 1213.

²⁰⁰ *Id.*

²⁰¹ *Id.* As *Feist* makes clear, effort alone would no longer support copyright.

²⁰² 126 F.3d 977 (7th Cir. 1997).

²⁰³ *Id.* at 979.

²⁰⁴ *Id.* at 977.

procedures were apparently organized in a somewhat logical manner within the *Code*.²⁰⁵ Delta Dental, meanwhile, published its own code of dental procedures, entitled *Universal Coding and Nomenclature* (hereinafter “*Universal Coding*”).²⁰⁶ The *Universal Coding* copied liberally from the American Dental Association’s *Code*, including both the descriptions of procedures and their serial numbers.²⁰⁷ The American Dental Association brought suit for infringement, and Delta Dental Association defended on the grounds that, among other things,²⁰⁸ the *Code* did not constitute copyrightable subject matter.

Judge Easterbrook concluded that the dental taxonomy was entirely copyrightable. He began his analysis with the oft-parroted truism of current American copyright jurisprudence: that “[t]he necessary degree of ‘originality’ [to qualify for copyright protection] is low, and the work need not be aesthetically pleasing to be literary.”²⁰⁹ He went on to give this statement a more tangible test by noting that originality’s locus is found in the number of ways that an author could express a given work without abandoning its underlying meaning. As exemplary of this point, Judge Easterbrook explained that Einstein could have described “relativity in any of a hundred different ways; another physicist could expound the same principles differently.”²¹⁰

²⁰⁵ *Id.*

²⁰⁶ *Id.*

²⁰⁷ *Id.*

²⁰⁸ In addition to grounds of copyrightable expression, Delta Dental also claimed that it was licensed to use the serial numbers and descriptions since it participated in the original creation of American Dental’s *Code*. *Id.* at 978. Alternatively, Delta Dental claimed that it made fair use of the *Code*, or that the copyright in the *Code* had expired. *Id.* The district court did not reach these issues prior to the appeal to the Seventh Circuit, and their outcome is not relevant to the discussion here. *Id.* The district court ultimately found in favor of Delta Dental solely on the copyrightability grounds. *Id.*

²⁰⁹ *Id.* at 979.

²¹⁰ *Id.* The result of this part of Judge Easterbrook’s holding is both unobjectionable and irrelevant here. His rationale leaves something to be desired. First, he puts in play a perfunctory, albeit somewhat misguided, theory of copyrightability. In this case, though, the sheer number of potential variations of the work nullifies any concern (or imprecise result) that might follow from Judge Easterbrook’s failure to note the likelihood of individual variations – that is, although Judge Easterbrook fails to realize that not all variations have the same probability, each is probably sufficiently unlikely to merit copyright. Second, his analysis of merger is not without glaring fault: his statement that “[t]he *Code*’s descriptions don’t ‘merge with the facts’ any more than a scientific description of butterfly attributes is part of a butterfly,” is misleading at best and completely wrong at worst. *Id.* In his hypothetical situation, the merger doctrine (in its usually accepted

After applying this principle to find that the descriptions of dental procedures were indeed capable of many stylistic and organizational variations,²¹¹ Judge Easterbrook took the bolder step of using the principle to justify copyright in the *Code*'s selection of serial numbers. He detailed at length the range of choice that a code of numbers inheres:

The number assigned to any one of the...descriptions could have had four or six digits rather than five; guided tissue regeneration could have been placed in the 2500 series rather than the 4200 series; again any of these choices is original to the author of a taxonomy, and another author could do things differently. Every number in the ADA's Code begins with zero, assuring a large number of unused numbers for procedures to be devised or reclassified in the future; an author could have elected instead to leave wide gaps in the sequence.²¹²

Judge Easterbrook's application, therefore, was a standard recitation of the nearly infinite variations that the *Code* could have assumed, a simple reapplication of the analysis that he had used to uphold copyright in the procedure's descriptions.²¹³ In this regard, his finding of copyright in the *Code*'s system of serial numbers seems uncontroversial.

Decided contemporaneously to *American Dental*, but on facts much closer to those in *Toro*, was *Mitel, Inc. v. Iqtel, Inc.*²¹⁴ In *Mitel*, the Tenth Circuit upheld the district court's denial of Mitel's motion for preliminary injunction for copyright infringement.²¹⁵ Mitel manufactured and installed call controllers.²¹⁶ As part of the

form) would not apply to the attributes of the butterfly, just as the doctrine would not apply to the performance of dental procedures in the *Code*; merger would instead hold that the fact of scientifically describing a dental procedure (or part of a butterfly in the hypothetical) merged with the resulting scientific description. Again, while Judge Easterbrook's analysis is fundamentally unsound, his result is likely appropriate as to the *Code*'s organization and procedural description.

²¹¹ *Id.*

²¹² *Id.*

²¹³ *Id.*

²¹⁴ 124 F.3d 1366 (10th Cir. 1997).

²¹⁵ *Id.* at 1368.

²¹⁶ A call controller is a system that enables a party, like a small business, to pool its telephone services and create settings that govern, for example, the routing of

installation process, a technician would enter a variety of four-digit command codes that corresponded to a set of functional features that Mitel's client desired.²¹⁷ The call controller, upon receipt of the codes, would set the telephone systems of Mitel's clients according to the value and sequencing of the digits.²¹⁸ Mitel designed sixty-four codes in all, some of which a technician could adapt to select the number of phones to which the code would apply.²¹⁹

Nine years after Mitel's entry into the call controller market, Iqtel decided to market its own iteration of the call controller.²²⁰ In order to adapt the system most effectively to the current market, Iqtel elected to employ Mitel's command codes.²²¹ Iqtel premised this decision on a need for compatibility with Mitel's current system, which commanded a "large share of the ... market."²²² This compatibility would thus enable technicians familiar with Mitel's system to transition more easily to installation of Iqtel's call controllers.²²³ To this end, Iqtel utilized Mitel's command codes in Iqtel's systems and technician's manuals.²²⁴

The Tenth Circuit found the command codes uncopyrightable.²²⁵ The court stated, as a preliminary matter, that Iqtel's admission of actual copying limited the scope of the litigation to the copyrightability of the four-digit codes,²²⁶ since infringement can only result from copyright-protected works.²²⁷ To narrow the

incoming calls or the length of time between the receipt of a call and an automatic message. *Id.*

²¹⁷ *Id.*

²¹⁸ *Id.*

²¹⁹ *Id.*

²²⁰ *Id.* at 1369.

²²¹ *Id.*

²²² *Id.*

²²³ *Id.*

²²⁴ *Id.*

²²⁵ *Id.* at 1376.

²²⁶ *Mitel*, 124 F.3d at 1370. The court proceeded to reject the district court's findings based on a literal reading of 17 U.S.C. § 102(b) wherein the command codes constituted an uncopyrightable "method of operation." *Id.* at 1372. The court felt that "although an element of a work may be characterized as a method of operation, that element may nevertheless contain expression that is eligible for copyright protection." *Id.*

²²⁷ To prove infringement, a plaintiff must produce evidence of both actual copying (proven through evidence of direct access to the work at issue, constructive access to the work at issue, or striking similarity between the works) and substantial misappropriation of the work. The latter element requires that the defendant have pirated copyrightable expression. Underlying facts, ideas, or other public domain

codes to their protectable form, the court sifted out any unprotectable elements under a *Feist* originality standard. Under that standard, the court first rejected the copyrightability of the codes insofar as they were random.²²⁸ The court buttressed its finding on one Mitel employee's characterization of the code assignment process as "real [*sic*] close to random."²²⁹ Such "arbitrary selection of three or four numbers required *de minimis* effort."²³⁰ The court further denied protection in elements that embodied an ascending sequential series of numbers, likening that selection to the alphabetical arrangement in *Feist*.²³¹

Following the *Feist* originality step in the sifting process, only two small subsets of the command codes, called descriptions and values, remained eligible for copyright. The court rejected even these, however, on the grounds that they were nothing more than *scènes à faire*.²³² In other words, external factors nullified any possible creative choice in Mitel's descriptions and values. Such external factors included "hardware standards and mechanical specifications, software standards and compatibility requirements, computer manufacturer design standards, industry programming practices, and practices and demands of the industry being serviced."²³³ Given each of these constraints, Mitel's selection of descriptions and values was all but inevitable and not eligible for copyright. Because no element of Mitel's codes was worthy of copyright protection, the court affirmed the district court's denial of preliminary injunction for Mitel.²³⁴

elements – generally unprotected by copyright – may therefore be taken with impunity. *See e.g.*, *Miller v. Universal City Studios, Inc.*, 650 F.2d 1365 (5th Cir. 1981) (finding the use of plaintiff's research and facts not to infringe the plaintiff's copyrightable work as such research and facts were not copyrightable in and of themselves) *and* *Hoehling v. Universal City Studios, Inc.*, 618 F.2d 972 (2d Cir. 1980).

In *Mitel*, since Iqtel stipulated that it had in fact copied the work, Mitel needed to only prove appropriation of copyrightable expression. The copyrightability of the codes, therefore, became the crux of the case.

²²⁸ *Mitel*, 124 F.3d at 1374.

²²⁹ *Id.*

²³⁰ *Id.* at 1373.

²³¹ *Id.* at 1374.

²³² *Id.* at 1375. As noted in Section I *supra*, the *scènes à faire* doctrine is a corollary of the merger doctrine typically applied to literary situations. The court here could have interchangeably employed the merger doctrine as justification for its result.

²³³ *Id.*

²³⁴ *Id.* at 1376. Since the court was able to resolve the case on copyright grounds alone, it declined to address the issues of fair use under 17 U.S.C. § 107.

Taken as a group, the three decisions examined to this point do not seem to read inconsistently. On one hand, if a numbering system can be held to be an “arbitrary” assignment of numbers without conveying any meaning in the assignment, as was the case in *Toro* and *Mitel*, the system will fail copyright.²³⁵ On the other hand, where a system attaches some overlapping organization or structure to the works, as in *American Dental*,²³⁶ the system will be adequately creative to permit a finding of originality, a finding that comports entirely with the dicta in *Toro*.²³⁷ Thus, the *Mitel* court’s use of the *scènes à faire* doctrine was just a means to the opposite outcome: where the *Code* in *American Dental* involved creative, unconstrained organization, the command values and descriptions in *Mitel* were the result of highly constrained organization.

Unfortunately, however, any such cohesive reading of this set of cases belies Judge Easterbrook’s ultimate justification for finding copyright in *American Dental*. Under his standard, where the author of a serial number encoding theoretically could have selected different digits or a different number thereof, the work will bear witness to sufficient originality.²³⁸ Using this quantum, the courts in *Mitel* and *Toro* could have justified copyright in the command controls or the parts numbers, respectively, by the mere possibility that the command controls or parts numbers could have been presented differently, regardless of the inherently arbitrary quality of any of the possible digit sequences. Put in the opposite manner, the *Code* in *American Dental* seems no less arbitrary than the numbering systems in *Mitel* and *Toro*.²³⁹ *Mitel*’s secondary use of the *scènes à faire*, furthermore, does little to overcome this inconsistency given the primary application of *Feist*’s creativity standard. Read in this fashion, these three cases represent a fundamental clash over the validity of copyright in purely arbitrary choice.²⁴⁰ This underlying seed of

²³⁵ See *Toro Co. v. R & R Prods. Co.*, 787 F.2d 1208, 1213 (8th Cir. 1986) and *Mitel*, 124 F.3d at 1373.

²³⁶ See *Am. Dental Assoc. v. Delta Dental Plans Assoc.*, 126 F.3d 977, 979 (7th Cir. 1997).

²³⁷ See *Toro*, 787 F.2d at 1213.

²³⁸ See *Am. Dental*, 126 F.3d at 979.

²³⁹ In fact, the only real distinguishing factor between these cases is the “effort” evident in *American Dental*. That effort alone, *Feist* assures us, is not sufficient to merit copyright protection. Furthermore, the “effort” spoken of by Judge Easterbrook adds no meaning to the *Code* at issue in *Am. Dental*.

²⁴⁰ Granted, Judge Easterbrook read some minimal constraint into the *Code*’s selection of digits – he felt that the expandability of the taxonomy depended on whether digits were non-consecutive, thereby permitting some expansion within the

inconsistency would blossom in the Third Circuit's fractured opinions in *Southco, Inc. v. Kanebridge Corp.*²⁴¹

Southco involved yet another dispute over the validity of copyright in a serial numbering system. Southco, Inc. manufactured a variety of different hardware products, such as “rivets, latches, handles, and ‘captive fasteners.’”²⁴² To permit easy identification of these parts, Southco developed a numbering system in which each digit corresponded to a characteristic of a given piece of hardware. The first two digits, for instance, could define the type of product; the next set of digits, the thread size, and the next set, the product's material composition.²⁴³ Since Southco applied the numbering system consistently, manufacturers and subcontractors were able to identify and order parts solely by number.²⁴⁴

Kanebridge Corporation, a distributor of competing hardware products, decided to make use of Southco's parts numbering system in order to demonstrate that the quality of the parts that Kanebridge distributed was equivalent to higher-priced Southco parts. To this end, in its commercial literature, Kanebridge published comparison tables of its own numbers placed beside Southco's numbers. Kanebridge described its copying as a legitimate means of competition in the market.²⁴⁵ Without this manner of advertisement, Kanebridge asserted “customers would lose the opportunity to obtain *lower*-cost alternative fasteners.”²⁴⁶ Kanebridge's intentions notwithstanding, Southco brought suit for infringement of Southco's copyright in the serial numbering system.²⁴⁷

In an opinion by Judge Alito, the majority of the Third Circuit²⁴⁸ found that the serial numbers were not the appropriate

Code, or whether the *Code* was to build consecutively above the last number in the series. See *supra* note 205. This constraint is absolutely minimal as compared to the vast lack of constraint shared by *Am. Dental*, *Toro*, and *Mitel* – the otherwise arbitrary assignment of numbers to things. The existence of this constraint in *American Dental*, therefore, does not render the *Code* significantly less arbitrary than its *Toro* and *Mitel* counterparts.

²⁴¹ 390 F.3d 276 (3d Cir. 2004).

²⁴² *Id.* at 278.

²⁴³ *Id.*

²⁴⁴ *Id.*

²⁴⁵ *Id.* at 279.

²⁴⁶ *Id.* (emphasis added by the author).

²⁴⁷ *Id.* at 279. Southco also brought a slew of trademark claims, including false advertising, trademark infringement, unfair competition, and common law claims for trademark infringement and trademark dilution. *Id.*

²⁴⁸ Nine judges agreed with the first of Judge Alito's two lines of reasoning; six

subject of copyright.²⁴⁹ In justifying his holding, Judge Alito followed two separate lines of reasoning. First, he reviewed the numbering system in light of the originality requirement. After a *de rigueur* regurgitation of *Feist*, he noted briefly that the creation of the numbering system was nothing more than an unprotectable idea or system and accordingly was uncopyrightable.²⁵⁰ All that remained to analyze, then, was the second step of Southco's encoding procedure: the application of the numbering system to various parts.²⁵¹ As to this decision, Judge Alito emphasized that once the encoding system was in place, "all of the products in the class could be numbered without the slightest element of creativity."²⁵² He further reinforced this fact by noting its necessity given the nature of the system: if Southco were to be creative in its system and vary the number for aluminum screws, "customers who wished to purchase aluminum screws but were unaware of this variation would be befuddled."²⁵³

Before addressing the second reason for denying copyright, Judge Alito felt it necessary to address Southco's argument that creating a parts numbering system was indistinguishable from the act of taking a photograph relevant in *Burrow-Giles Lithographic Co. v. Sarony*.²⁵⁴ The substance of Southco's argument was that, like the positioning of Oscar Wilde in *Burrow-Giles*, the creation of the code represented the adequately original step prior to a more mechanical step: in *Burrow-Giles*, the operation of the camera, and in *Southco*, the application of the numbering system.²⁵⁵ Judge Alito distinguished the two situations in a variety of ways. First, the photograph in *Burrow-Giles* "was indisputably a work of art,"²⁵⁶ while Southco's serial numbers merely "convey[ed] information about a few objective characteristics of mundane products."²⁵⁷ Furthermore, a photograph, unlike a serial numbering system, carries "more complex and indeterminate ideas."²⁵⁸ Finally, the production of a photographic

judges joined his entire opinion. *Id.* at 277.

²⁴⁹ *Id.*

²⁵⁰ *Id.* at 282. To call Judge Alito's analysis on this point brief is something of an understatement. The text relevant to this topic encompasses just seven lines of one column in the reporter. *Id.*

²⁵¹ *Id.*

²⁵² *Id.*

²⁵³ *Id.*

²⁵⁴ 111 U.S. 53 (1884).

²⁵⁵ *Southco*, 390 F.3d at 284.

²⁵⁶ *Id.*

²⁵⁷ *Id.*

²⁵⁸ *Id.*

portrait involves an adequate level of artistic choice, as opposed to a mechanical application of a system composed solely of completely rigid rules.²⁵⁹

The majority's second line of reasoning unfavorably compared Southco's numbering system to short phrases, a subject that is rarely (if ever) worthy of copyright protection.²⁶⁰ In support of its comparison, the court examined the history of continuous and consistent denial of copyright in "short words and phrases" dating from the late fifties to the present.²⁶¹ Such denial had apparently seen extension to cases of serial parts numbers on the grounds that short phrases and parts numbers were analogous.²⁶² Additionally, Judge Alito expressed concern that granting copyright in the number system would give Southco sole control over the numbers that they had chosen.²⁶³ Therefore, he elected to defer to the comparison between serial numbers and short phrases as an additional ground for denying copyright.²⁶⁴

Judge Roth filed a dissenting opinion²⁶⁵ wherein she applied Judge Easterbrook's standard from *American Dental* to the merits of the copyright claim. She began her analysis with a searching inquiry

²⁵⁹ *Id.* As a relevant addendum to the discussion of photographs, the court went on to reject any comparison between the numbering system and aleatoric art. Aleatoric art, unlike the numbering system, "does not result from the rigid application of a system of pre-set rules." *Id.* The court's self-imposed limitation of analysis to the application of the system (thereby ignoring the creation of the system) nullifies the comparative value of aleatoric art as an example. For an alternative discussion that leads to the same result as the court would reach here, see the discussion of modern art *infra*.

²⁶⁰ *Id.* at 285.

²⁶¹ *Id.* at 285-86.

²⁶² *Id.* at 286.

²⁶³ *Id.* The validity of this argument is dubious. For example, use of the word "virtue" in a sentence would not grant the drafter the right to exclude all future writers from use of that common word. See Learned Hand's abstractions test in *Nichols v. Universal Pictures, Corp.*, 45 F.2d 119, 121 (2d Cir. 1930), discussed *supra*, Section I. An invented word, however, might create a more interesting argument. The copyright protection hypothetically granted in a serial numbering system would be very thin, likely limited to exact or near exact copying by a party engaged in the parts vending business. The result of such protection, therefore, begins to overlap significantly with the protection such a system might receive under the trademark equivalent subject to the "likelihood of confusion" test for infringement. See, e.g., 15 U.S.C. § 1125(a)(1)(A) (2006) and *Polaroid Corp. v. Polaroid Elects. Corp.*, 287 F.2d 492, 495 (2d Cir. 1961).

²⁶⁴ *Southco*, 390 F.3d at 287. Judge Becker filed a concurring opinion which is not discussed here.

²⁶⁵ *Id.* at 290. One other judge joined her dissent.

into the idea/expression dichotomy as it applied to the case.²⁶⁶ She framed her discussion in terms of the difficult balance that the dichotomy seeks to strike – between competition on one hand, by not allowing users of “ideas” to exclude future use of the ideas, and protection on the other, by not allowing an infringer’s *de minimis* changes to go unpunished.²⁶⁷ Unfortunately, a given case could present many resolutions of this same tension. She then expounded on her concept of the “idea” in Southco’s numbering system as compared with the majority’s concept. In her opinion, Southco did not attempt to gain control over the idea of creating a code, as the majority suggested, but instead attempted to gain control over a more narrow articulation of such a code – its own individual collocation of numbers.²⁶⁸ Viewed from the majority’s “overbroad definition,” the court had no choice but to deny copyright in the numbering system.²⁶⁹ At her level of breadth, the code was adequately protected without denying others the right to use a code to number products.²⁷⁰

Judge Roth reinforced her view of Southco’s “idea” in the numbering system by means of an exhaustive application of Judge Easterbrook’s holding in *American Dental*. From her vantage point, “there would seem to be no limit to the number of ways [that product] specifications could be encoded.”²⁷¹ She then went on to detail the different points of choice that Southco had available to it in creating the code: “[Southco] could [have] use[d] three digits [instead of two]..., or letters instead of numbers, or a combination of letters and numbers, or even simple abbreviations in lieu of coded letters or numbers.”²⁷² In conjunction with a reminder that originality is a low bar,²⁷³ she proceeded to cite to dicta from *Toro* for the proposition that “a system that uses symbols in some sort of meaningful pattern, something by which one could distinguish effort or content, would be an original work.”²⁷⁴ In Judge Roth’s opinion, the Southco serial

²⁶⁶ *Id.* at 291. The majority, as noted above, spent very little time speaking to this point.

²⁶⁷ *Id.*

²⁶⁸ *Id.*

²⁶⁹ *Id.* at 292.

²⁷⁰ *Id.* at 293.

²⁷¹ *Id.*

²⁷² *Id.* Lest her readers fail to recognize the reflection of Judge Easterbrook’s *Am. Dental* analysis in this statement, Judge Roth includes a citation to this very rationale. *Id.* at 294 n. 13.

²⁷³ *Id.*

²⁷⁴ *Id.* at 295. Not long after, Judge Roth engages in a discussion of why the majority’s ruling would foreclose copyright in a variety of systems the likes of

numbering system was such a work. Given her disapproval of the majority's characterization of the idea/expression dichotomy, she would have upheld copyright in Southco's system.²⁷⁵

B. An Analysis of Serial Number Cases in Light of Probability Theory

At the outset, it bears noting that *Southco's* factual history differs somewhat from those at issue in the three previously discussed cases. This difference lies in the process that confronted the court: instead of mere assignments of numbers with no chance of repetition, and therefore, no pattern, Southco's code involved a true application step. This additional step, however, does not add any complexity in both common sense and probabilistic terms. In common sense terms, the court in *Southco* analyzed the application of a code perfectly: "[O]nce the rules of the system applicable to the particular product class are set, the numbers themselves are generated by a mechanical application of the rules and do not reflect even a spark of creativity."²⁷⁶ Indeed, the output sequence of serial numbers generated by a code's application reveals no deviation.²⁷⁷ In this regard, any creativity in the code – that which gives the code copyrightable value – can only come from the creation of the code, not its application. In basic probabilistic terms, the code's application has a probability equal

which Judge Easterbrook detailed as part of a similar slippery slope argument in *Am. Dental: Weight Watchers* point systems, lists of restaurants organized by "price range, corking fees, handicapped accessibility, or any other rule-driven criteria would be excluded. On the other hand, a list of restaurants based on more 'indeterminate' criteria, such as value or quality, would be protected. [citation omitted.] This discrepancy strikes me as both unprincipled and unprecedented." *Id.* at 297. As this Section will note later, these examples are completely inapposite to the case of serial numbers. Furthermore, while Judge Roth is correct in noting the odd paradox of copyright law that "soft" facts get protection where "hard" facts do not (and a sort of imprecision is thus rewarded), this finding is completely in keeping with precedent like the very case that she cites, *CCC Info. Serv. v. Maclean Hunter Mkt. Reports, Inc.*, 44 F.3d 61 (2d Cir. 1994).

²⁷⁵ *Southco*, 390 F.3d at 295.

²⁷⁶ *Id.* at 283.

²⁷⁷ One would do well to recall a presumption of functionality here that forces the application of a code to equal one. If the numbering system were applied with variations, it would not serve any purpose, and could not accordingly be called a "numbering system." See *id.* at 282. While such a possibility seems silly, it is also didactic. If constraints existed in neither the creation nor the application of the code, the acts of creating and applying the code would basically become a single unconstrained act.

to one (or certainty).²⁷⁸ The overall probability of the outcome of the two steps, normally computed by multiplying the probability of the first task with that of the second task, becomes merely the probability of the first task, in this case, the creation of the code.²⁷⁹ The creation of the code, therefore, is the only step with which a probabilistic copyright analysis is concerned, and happily for the sake of set size, is that which is common to each of the four serial number cases.

At bottom, analysis of code assignment presents one of the more difficult questions of copyrightable creativity, one which copyright seems singularly incapable of answering. The inconsistencies in the *Southco* opinions (and by extension, in the three opinions that preceded them) support this assertion. Upon closer investigation, the root of the inconsistencies becomes apparent: Judges Easterbrook and Roth applied a faulty theory operating in the guise of principled probabilistic analysis.

When Judge Easterbrook explained the many permutations that a serial number could assume without losing its function as a serial number system (the very point in which Judge Roth concurred in *Southco*), he seemed to apply the very analysis posited in this article. His statements that the serial “descriptions could have had four or six digits rather than five,”²⁸⁰ and that “an author could have elected instead [of starting the number with zero] to leave wide gaps inside the sequence,”²⁸¹ seem to state that the serial numbers were merely one of a nearly infinite number of choices available to the encoders, both in terms of number and arrangement of numbers. As such, any specific variation in the serial numbering code would necessarily reach an exceedingly low probability and thereby merit copyright protection.

However, the result of this rationale is flawed. The analysis presumes that each of the author’s selections in the code is the result of a meaningful choice among different numbers. The case presents,

²⁷⁸ This is merely a different way of saying exactly what Judge Alito pointed out: that application of a pre-existing code results in a certain outcome. *Id.*

²⁷⁹ This calculation is based on one of the most fundamental theorems of probability. See SCHEAFFER, *supra* note 105, at 21 (“If the first task in an experiment can result in n_1 possible outcomes and, for each such outcome, the second task can result in n_2 possible outcomes, then there are n_1n_2 possible outcomes for the two tasks together.” Given this statement, as noted above, if the second task has a probability of one, then the number of outcomes will be equal to n_1 , and the second task will have no effect on the probability of any outcome resulting from the first step.).

²⁸⁰ *Am. Dental Ass’n v. Delta Dental Plans Ass’n*, 126 F.3d 977, 979 (7th Cir. 1997).

²⁸¹ *Id.*

instead, a sort of non-constrained selection attached to no meaning or idea, which would remain completely uncopyrightable in a different field. For example, if a book were to follow this sort of purely random process, words would follow in a nonsensical sequence, without regard for the preceding or following choice, the book would almost certainly fail to qualify for copyright protection.²⁸²

This illustration demonstrates that probability theory requires a certain degree of constraint to reach a meaningfully low probability in a work's creation. In the case of random (serial) numbering processes, the probability of a generally nonsensical result is exceptionally high, perhaps certain. Thus, while many possible permutations exist in each serial number case, each set of numbers is of an equally meaningless form, a sort of merger on the nonsense-expression dichotomy. What Judges Easterbrook and Roth sought to do, therefore, was grant a copyright in chaos.²⁸³ Copyright law, in its normal articulation, is simply unable to cope with unconstrained expression in assessing copyrightable creativity. Therefore, while the probability theory is coterminous with copyright norms, the theory additionally suggests a solution to these controversial cases.²⁸⁴

²⁸² A *post hoc* constraint provides an exception to this example.

²⁸³ As a corollary to this point, even if this view of the probability theory seems contorted or artificial, its failure is edifying as to a different matter. By way of a proof by negation, the fact that the probability theory collapses precisely where traditional copyright law fails circumstantially reinforces the utility of the probability theory as an alternative explanation of copyrightability.

²⁸⁴ The division of opinions in *Southco, Inc. v. Kanebridge Corp.*, 390 F.3d 276 (3d Cir. 2004) sheds some light on this.

There are additional reasons to question the result that Judge Easterbrook reached in *Am. Dental*. Although his holding seems well-principled, his motivation for reaching his conclusion may not have been so. Underlying his decision are faint echoes of the economic justification for copyright law, a theory that traditionally sets the lowest bar for copyrightability, and one which is more closely related to British cases and pre-*Feist* "sweat of the brow" cases. While he failed to rationalize his decision explicitly in terms of an economic bar, he did not fail to mention the argument that the A.D.A. and other groups "depend on the copyright laws to recover the costs of the endeavor." *Id.* at 978. This very rationale lies at the heart of "sweat of the brow" decisions, where value of labor is made equivalent to creative value. And while it seems inappropriate to ascribe to a judge reasoning that is only mentioned in passing, Judge Easterbrook's strained reading of licensing contracts in *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996), permitted the subsistence of an alternate, contract-driven "sweat of the brow" doctrine. (In this widely criticized reading of the UCC and contract law, Judge Easterbrook really wanted ProCD to recover the costs of its efforts. *See, e.g.* Batya Goodman, Note, *Honey, I Shrink-Wrapped the Consumer: The Shrink-Wrap Agreement as an Adhesion Contract*, 21 CARDOZO L. REV. 319, 326 (1999)). While Judge Easterbrook seems

C. Modern Art, Another Form of the Serial Number Case

Lest the analysis of copyright in unconstrained decision seems an academic exercise confined to a delimited area of this field of law, a comparison between copyrights in serial numbers and those in modern art reveals that unconstrained copyright is perhaps more prevalent than the difficulties involved in the serial numbers cases would suggest. The field of modern art ranges over numerous forms and manifestations. Through “[d]epersonalization, the involvement of random choice, and anti-art,”²⁸⁵ modern art could take shape in a chromatic Rothko tableau²⁸⁶ or in Duchamp’s *LHOOQ*,²⁸⁷ a rendering of the Mona Lisa with a mustache. Yet there are unifying principles underlying this sometimes variegated field, and common clashes when the field runs up against the margins of copyright law.

In her article, *The Concept of Originality and Contemporary Art*, Nadia Walravens outlines some of these unifying principles and common clashes. According to Walravens, “[m]ost works today do not seek to describe a situation or a feeling and have no representational function in themselves.”²⁸⁸ This absence of representational function leaves the viewer of modern art without any easy lens through which to understand a work, or any constraint by which to measure a work’s meaning. The lack of easy bearing is precisely the thrust of the genre of modern art. Where traditional art recognizes that “only the form reveals the personal character of the author,”²⁸⁹ and the works linked to that field generally inhaled expressive elements in the resulting artistic product, modern art blends the form, the idea, and the process of creation into one interchangeable mass.

interested in perpetuating this doctrine, as a post-*Feist* case, such a low bar for copyrightability would be flatly inappropriate.

²⁸⁵ Nadia Walravens, *The Concept of Originality and Contemporary Art*, in DEAR IMAGES ART, COPYRIGHT AND CULTURE 171, 173 (Daniel Mclean & Karsten Schubert eds., Ridinghouse 2002).

²⁸⁶ See, e.g., the picture plates in JESSE DUKEMINIER ET AL., WILLS, TRUSTS, AND ESTATES 784 (7th ed. 2005). Rothko once relevantly said, “[A]ll of art is a portrait of an *idea*.” ROTHKO EXHIBITION BROCHURE, NATIONAL GALLERY OF ART, available at <http://www.nga.gov/press/2005/releases/rothko/rothko-brochure.pdf> (last visited Nov. 16, 2006) (emphasis added).

²⁸⁷ Lisa Florman, *LHOOQ Again: Tradition as Revision in the Work of Marcel Duchamp*, available at http://www.humboldt-foundation.de/en/netzwerk/frontiers/archiv/gafoh_2005/abstracts/florman.pdf (last visited Oct. 7, 2006).

²⁸⁸ Walravens, *supra* note 285, at 102.

²⁸⁹ *Id.* at 106.

Superficially, this interchangeable mass seems somewhat distinguishable from the discrete levels of idea/expression dichotomy only present in a serial numbering case. In a serial numbering system, idea and expression can only vest in certain, readily identifiable levels. In *Southco*, Judge Roth designated these levels as part of an insightful commentary – essentially, copyright could theoretically protect a serial numbering system by excluding other parties’ use of the idea of a numbering system, by excluding use of the numbers to create a serial numbering system, or by excluding infringement of the exact form in which the author of the system arranges the numbers.²⁹⁰

Certain forms of modern art seem to share in these discrete levels. For example, Judge Roth’s analysis²⁹¹ is equally applicable to a purely chromatic Rothko piece.²⁹² Copyright could protect the colors depicted from general public use, the idea of depicting the colors in the setting of painting, or the colors’ very specific embodiment on the narrow level of the painting itself. Art, however, comes loaded with, as Judge Alito put it, “indeterminate”²⁹³ ideas at the levels closer to the specific expression which may merit copyright protection. This distinction flows from fundamental differences between art’s more profound “meaning” and the overarching utility of a numbering system. With this additional meaning comes a theoretically greater number, and accordingly lower probability overlap, of ideas²⁹⁴ which might superficially suggest that protection of modern art at its narrowest articulation²⁹⁵ is at the very least more worthwhile than the same protection in serial numbers.

While some distinction seems potentially viable as between the discrete idea/expression levels necessary to a serial numbering system and the more blurry strata of the dichotomy in modern art cases, a side-by-side example matching a “ready-made” piece of art with a serial numbering system more clearly demonstrates the *rapprochement* between the two fields. Ready-mades, “in [the artist’s] quest to extend the frontiers of art,”²⁹⁶ are the result of manufacturing processes, “an ordinary functional object [turned] a work of art.”²⁹⁷ These works

²⁹⁰ *Southco, Inc. v. Kanebridge Corp.*, 390 F.3d 276, 291 (3d Cir. 2004) (Roth, J., dissenting).

²⁹¹ *Id.*

²⁹² See *DUKEMINIER*, *supra* note 286.

²⁹³ *Id.* at 284 (majority opinion).

²⁹⁴ See discussion of the paradox of expression *supra* Section V.

²⁹⁵ See description of Learned Hand’s abstractions test *supra* Section I.

²⁹⁶ *Walravens*, *supra* note 285, at 112.

²⁹⁷ *Id.* An example of such a work is Marcel Duchamp’s use of a urinal.

derive their artistic value, not from the object itself, “but rather the designation process through which the object is presented as a work of art.”²⁹⁸ A ready-made, therefore, is a work of art by virtue of choice before execution: the idea of the ready-made, “the idea forming the work, ... reveals the stamp [of the artist],”²⁹⁹ not anything the artist does once the work is chosen.

The process and result of assigning serial numbers present little difference as compared to the process and result of designating ready-made art just described. In each, the resulting work is entirely process-driven, and the final embodiment of each work blends casually with the act of creation. For each in their purest form, at the stage of creation, the act imposes little constraint, only a certain degree of selection. Where the author of a serial number sequence need only choose from among a set of symbols and order those symbols arbitrarily,³⁰⁰ the ready-made artist need only select from among a set of manufactured objects.³⁰¹ Each of these selections is the function of processes that derive in large measure from purely random choice and in little measure from a need to convey a specific idea.³⁰² This lack of constraint in creation translates (in most cases) to a result that creates no easily discernible or tangible meaning to the reader of the code or the viewer of the ready-made art.³⁰³

In fact, the most credible distinction between serial numbers and works of modern art is one of degree of possible *post hoc* constraint, that is, constraint evident in the final work that was not present in the creation process. To understand this point, Learned Hand’s famous comment is didactic: “if by some magic a man who had never known it were to compose anew Keats’s Ode on a Grecian Urn, he would be an ‘author,’ and, if he copyrighted it, others might not copy that poem, though they might of course copy Keats’s.”³⁰⁴ While Hand was speaking explicitly to the requirement of independent creation in copyright,³⁰⁵ his point also speaks to the process of a

²⁹⁸ *Id.* at 112-14.

²⁹⁹ *Id.* at 116. Walravens uses the moral rights terminology, “stamp of the artist” because her article is geared primarily towards acceptance of modern art in a French copyright system that requires such a “stamp.”

³⁰⁰ Recall the holdings in *Mitel*, *supra* note 185 and *Toro*, *supra* note 187.

³⁰¹ See Walravens, *supra* note 285, at 116.

³⁰² See *id.* at 102; see also *Toro*, 787 F.2d at 1208.

³⁰³ See Walravens, *supra* note 285, at 102 (stating that the goal of the modern artist is to take the viewer through the process of selecting and contextualizing the *ouvrage*, not to create a meaningful form *in se*).

³⁰⁴ *Sheldon v. Metro-Goldwyn Pictures Corp.*, 81 F.2d 49, 54 (2d Cir. 1936).

³⁰⁵ Copyright requires both a “modicum of creativity” and “independent creation”

randomly or arbitrarily created artwork. Just as Hand's hypothetical poet did not intend to copy Keats but happened upon the same words through some "magic," so too may an aleatoric artist happen upon a form of constrained expression – Michelangelo's *David*, for instance – without intending it. In this way, while the artist's creative process is purely unconstrained, the result will bear witness to some *post hoc* constraint, figurative or otherwise.³⁰⁶ Serial numbers, on the contrary, do not leave any possibility of striking on a constraint. Any constraint in a serial number system will of necessity exist prior to the creation of the system – in *Mitel*, hardware specifications,³⁰⁷ software specifications,³⁰⁸ or industry standards³⁰⁹ constrained the resulting serial numbering system, each in place prior to the initiation of the creative process. In cases where both serial numbering systems and aleatoric artworks are unconstrained in their creation, however, any possibility of difference in the result for analytical purposes – the existence of a *post hoc* constraint in the artwork – is a case of infinitesimal likelihood, the result of, as Hand would put it, "some magic." This unlikely potential difference does not pose a significant analytical stumbling block to the comparison of serial numbers and modern art.

The striking likeness of both process and result in cases of modern art and serial numbering systems suggest that modern art's copyright status should match that of the serial number: modern art, in its least constrained forms, should not be the proper subject of copyright.³¹⁰ Two final conceptual hooks stand in the way of the

in addition to the fixation requirement. Independent creation permits, as Hand's quotation suggests, the identical result from two separate authors provided that one did not copy from the other.

³⁰⁶ It seems exceedingly unlikely that an artist would both happen on constrained work and *accept* it; the *post hoc* constraint difference between modern art and serial numbering is at best an infinitesimal concern. See Russ VerSteeg, *Rethinking Originality*, 34 WM. & MARY L. REV. 801, 824 (1992) (noting that creativity as a process requires an "acceptance" step. One can only presume that the artist seeking to create random art would not accept an accidental *David* or *Death of Marat*).

³⁰⁷ See *supra* note 233.

³⁰⁸ *Id.*

³⁰⁹ *Id.*

³¹⁰ Copyright should not be foreclosed in all forms of modern art, but large segments of the field would merit little more than the thinnest copyright that protects no more than actual copying. A later Piet Mondrian painting serves as a good example. See Piet Mondrian, the Transatlantic Paintings (Harvard University Museum), http://www.erg.be/multimedialab/doc/projections/doc_mondrian.pdf, 19 (last visited Oct. 26, 2006). No one would contend that Mondrian could copyright the drawing of geometric shapes bounded by solid black lines and interstitially

adoption of this conclusion – first, Judge Alito’s misgivings about denying copyright to art, and second, Walravens’ suggestion that modern art, through accepted practice *does* in fact impose constraints on the artist. To allay the former concern, one need only recall Justice Holmes’ oft-cited admonition in *Bleistein v. Donaldson Lithographing Co.*³¹¹ – “It would be a dangerous undertaking for persons trained only in the law to constitute themselves final judges of the worth of pictorial illustrations.”³¹² Just as judges should not concern themselves with what does not constitute “art” under the copyright statute,³¹³ they should equally avoid giving “art” an exalted place in the copyright world. If a form of art strays into unprotected territory, its analysis should be no different than that afforded non-artistic works.³¹⁴

The second concern, on the other hand, presents a greater potential of bringing modern art back into the copyrightable fold. On this count, Walravens explained the viability of importing norms from the field of modern art into the practice of copyright by suggesting that judges ought to apply flexible standards as to the stamp of personality in modern art.³¹⁵ She noted prior judicial reliance “on the criteria of the school of modern art.”³¹⁶ If these criteria provide, as they did in the case that Walravens cites (but does not explain), some constraint on the ultimate expression, works of modern art may escape relegation to the uncopyrightable domain of completely arbitrary expression.³¹⁷ If such constraints are only *de minimis*, taken with the rejection of Judge Alito’s concerns above, modern art, like serial numbering systems, may not be worthy of copyright under the probability theory’s assessment.

decorated with mostly primary colors. Each line and color, however, might be a low probability outcome in its specific embodiment. Again, imposing thin copyright in this field just as constraint becomes apparent comports entirely with the overall structure of the probability theory. *See generally* *Bleistein v. Donaldson Lithographic Co.*, 188 U.S. 239 (1903).

³¹¹ 188 U.S. 239 (1903).

³¹² *Id.* at 251 (holding that lithographs advertising a circus were sufficiently creative to permit copyright protection).

³¹³ This was the issue concerning the lithographic advertisements in *Bleistein*.

³¹⁴ It should be noted that granting copyright in modern art is not an undesirable outcome as far as the utilitarian theory, described *supra* Section I, is concerned.

³¹⁵ *See* Walravens, *supra* note 285, at 146 (primarily concerned with acceptance of modern art under a moral rights regime).

³¹⁶ *Id.* at 150.

³¹⁷ *See* Gervais, *supra* note 137.

VII. CONCLUSION

With an assessment of the three distinct areas of the spectrum of constraint in mind, a macroscopic structure becomes clear. The most creative work, and therefore the work best suited to copyright protection, actually sits in an area of moderate constraint because of the low probability outcome that follows from a low probability idea. As constraint increases from the central case, the low probability idea becomes a high probability idea, and that in turn leads to a high probability expression unworthy of copyright. As constraint decreases from the central case, the low probability idea becomes no idea at all, and potentially copyrightable expression ceases to express anything.

This structure, the direct result of the theory proposed in this Comment, resolves the two main problems that *Feist* left the copyright community. First, where *Feist* failed to define creativity, this Comment couches creativity in terms of constraint and the probability of result – two concepts that run through all possible cases and permit analogies where analogy might be otherwise impossible. Second, this Comment explains a way of balancing the varying degrees of randomness and rationality in potentially copyrightable expression by incorporating concerns for each into a larger normative theory. The overall result is a consistent analytical framework that provides legitimate substance to the word “creativity” over and above many courts’ uncertain parroting of *Feist*’s minimal guidance.

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**FOR THE PEOPLE AND BY THE PEOPLE: A NEW PROPOSAL
FOR DEFINING INDUSTRY STANDARDS IN COMPUTER
SOFTWARE**

Matthew John Duane †

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“The nicest thing about standards is that there are so many of them to choose from.” Ken Olsen¹

I. INTRODUCTION

For better or for worse, software standards have become a ubiquitous tool in the computer industry, as indispensable as an O’Reilly book,² but far more powerful in maintaining the direction of the market. Usually defined by standard-setting organizations (“SSO”) comprised of corporations in a particular industry, software standards define many of the technologies users take for granted, from those used to navigate the Internet to those that govern how images are displayed on a screen.³ Yet, the real question is not “what” defines a standard, but “who” defines it. Is it the government’s duty to moderate the standardization of the industry through established agency mechanisms, as it does in other venues such as the Federal Trade Commission (“FTC”) and Federal Communications Commission (“FCC”)? Or should SSOs utilize their expertise and access to those on the cutting edge to make these determinations?

† B.S.E., Computer Engineering, University of Michigan, 2003; J.D. Candidate, Michigan State University College of Law, 2007.

¹ Founder of Digital Equipment Corp. (DEC), a pioneering developer of minicomputers for the scientific and engineering communities in the 1970s and 1980s. Garrison Spik, *If You Build It ... the Medical Data and the Users Will Come*, Fed Tech, http://www.fedtechmagazine.com/article.asp?item_id=156 (last visited Nov. 27, 2006).

² Published by O’Reilly Media, a computer consulting company founded by Tim O’Reilly, these books provide detailed explanations and tutorials for using most programming languages as well as popular software titles. A unique characteristic of each book is that the cover is adorned with a drawing of an animal, which is usually somewhat obscure like a flat-headed cat or Howler monkey. See O’Reilly Media Homepage, <http://www.oreilly.com> (last visited Nov. 28, 2006).

³ See James Clark, *Technical Standards and Their Effects On E-Commerce Contracts: Beyond the Four Corners*, 59 BUS. LAW. 345, 346 n.2 (2003) (listing technologies owned by the SSO Internet Engineering Task Force that comprise the backbone of the Internet); see discussion of GIF patent *infra* Section II. A.

Perhaps it should be a marriage of the two, with governmental and administrative weight given to the decisions of these assemblies. Ultimately, software standards raise issues of determining how best “[t]o promote the Progress of Science and useful Arts,”⁴ whether this duty should be left to the government or the people, and just how much, if any, cooperation should exist between the two.

This note proposes the creation of a federal SSO similar to existing federal agencies involved in standards adoption but with many of the policies and incentives of private SSOs. Section II provides an overview of the standard setting process and some of the advantages and disadvantages inherent in this process. Section III provides two recent examples of some of the dangers and issues surrounding software standards, particularly those faced by the SSO and users that pushed for them. Finally, Section IV outlines the proposed federal SSO and how it would improve the existing system. While this proposal is certainly not without its faults and shortcomings, the current standard setting is far too unstable considering the importance of the technology involved; this proposal is not designed to fix every problem with SSOs, but merely to help standardize the standardization process.

II. DEFINING A STANDARD: CONNECTING STANDARDS, GOVERNMENT AGENCIES, AND SSOs

A. *What is a Standard?*

One can learn a great deal about standards by visiting a local hardware store. Row after row of wrenches, drills, screws, and wood stand as homage to the benefits of standardization, with consistent measurements and sizes (e.g., two-by-four cuts of wood, metric and American-sized screws, nuts, etc.), leading to increased interoperability and consumer faith in the sufficiency and quality of the components. Yet, until the late nineteenth century such standards never existed; instead, all screws, nuts, and bolts were custom-made and, probably to ensure repeat business, incompatible with others.⁵ William Sellers then proposed a standard to the industry, which became widely adopted and which brought about the mass production

⁴ U.S. CONST. art I, §8, cl. 8.

⁵ *The Fortune of the Commons*, THE ECONOMIST (London), May 10, 2003, (Survey) at 13.

necessary for the construction industry to flourish.⁶ Thus, a standard's chief purpose is to bring some semblance of order and continuity to the affected parties, to "put everyone on the same page" by providing a common rubric from which to work.

Though Webster defines "standard" as "something established by authority, custom, or general consent as a model, example, or point of reference,"⁷ it is ironic that a cornucopia of organizations exists for determining how that term applies to an industry or technology.⁸ Standards tend to arise from one of two possible sources: standards become such because the market adopts them through sales and user preference, or an organization such as an SSO officially recognizes the standard. The first, commonly referred to as "de-facto standardization," occurs when "consumers gravitate towards a single product or protocol and reject its competitors" with no direct impetus from a third party.⁹ An example of de facto standardization is the adoption of VHS over Betamax, which occurred despite the general view that Betamax was the better technology.¹⁰ The other method, referred to as "de jure standardization," occurs when a governing body

⁶ Sellers proposed a "uniform system of screw threads," which later became widely adopted. Without standardized [sic], easy-to-make screws, Mr. Sellers' argument went, there could be no interchangeable parts and, thus, no mass production." *Id.*

⁷ MERRIAM-WEBSTER'S DICTIONARY OF LAW 467 (1996).

⁸ "Standards (and SSOs) come in a variety of forms." Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889, 1896 (2002). See also Christopher L. Sagers, *Antitrust Immunity and Standard Setting Organizations: A Case Study in the Public-Private Distinction*, 25 CARDOZO L. REV. 1393, 1398 n.14 (2004) ("Even prior to the explosion of the high tech economy, one estimate of the late 1980s found as many as 400 private SSOs in the United States, producing as many as 30,000 standards . . . [and another] found that as many as 100,000 people were involved in standard setting activity."). Virtually all industrialized nations have at least one government-sponsored SSO, with a variety of smaller public and private organizations supplementing the SSOs in particular fields.

⁹ Lemley, *supra* note 8, at 1899. See also Melonie L. McKenzie, *How Should Competing Software Programs Marry? The Antitrust Ramifications of Private Standard-Setting Consortia in the Software Industry*, 52 SYRACUSE L. REV. 139, 143 (2002). At times, random factors that defy more logical rationales such as superior technology or ease of use, such as public perception and chance marketing, appear to guide de facto standardization.

¹⁰ See Penina Michlin, *The Broadcast Flag and the Scope of the FCC's Ancillary Jurisdiction: Protecting the Digital Future*, 20 BERKELEY TECH. L.J. 907, 929 n.148 (2005) (citing Filmbug, Video and VHS, <http://www.filmbug.co.uk/dictionary/vhs.php> (last visited Sept. 29, 2006)).

or SSO officially adopts and promotes a standard in the market.¹¹ Thus, when the FCC adopts a new transmission protocol for radio signals, the resulting protocol is less a result of market factors than of official decree.

Despite the plethora of methodologies and divergent doctrines that exist, most adopted standards stem from at least one of two rationales: commercialization and product interoperability or product safety and quality.¹² The desire for commercially-viable standards that promote interoperability is a hallmark of most private SSOs, as SSOs derive their inception and membership largely from key players in that industry.¹³ Conversely, when private SSOs grapple with safety and quality concerns, the SSOs more commonly vest standard consideration in government agencies such as the Occupational Safety and Health Administration (“OSHA”) and the Food and Drug Administration (“FDA”), agencies entrusted to protect the public from faulty or low-quality wares.¹⁴

1. Commercial and Interoperability Standards

The key difference between commercial and safety standards is best described as a means-end dichotomy. Safety and quality tend to be viewed as endgames alone, and thus a variety of methods that attain these standards are acceptable.¹⁵ By comparison, the focus in a

¹¹ See Lemley, *supra* note 8, at 1898; McKenzie, *supra* note 9, at 144.

¹² Lemley, *supra* note 8, at 1897.

¹³ This is discussed in greater detail later as it applies to the software industry, but at a base-level it is important to understand that most SSOs are voluntary organizations that require members to be financially involved in the field the SSO oversees.

¹⁴ “Consumers have expectations about the design, performance, safety, quality and reliability of the products and services that they buy and use. No-one [sic] wants products of poor quality . . . which are incompatible with equipment he or she already has International Standards help to raise [these] levels . . . and provide these benefits economically.” ISO and the Consumer, <http://www.iso.ch/iso/en/comms-markets/consumers/iso+theconsumer.html> (last visited Nov. 25, 2006).

¹⁵ For example, every state has its own set of laws and statutes that tend to be unique to that jurisdiction, even though all states ostensibly design the laws for the same goal of defining the norms of a safe and productive society. Provided that these laws clearly outline common standards for crimes, property disputes, and social courtesies, the distinct methods by which they are obtained tend not to be questioned. For example, each state usually has its own bar exam that an applicant must pass in order to practice law. In these instances, homogeneity matters only in the result, not the method by which it is obtained.

commercial environment is a single acceptable standard from the surplus that currently exists, meaning “in some cases it may be more important that an industry coalesces around a single standard than which particular standard is chosen.”¹⁶

Commercial standards are a classic example of “network effects,” a phenomenon in which the standard is valued not by some intrinsic merit of the technology but by the number of adopters in the industry.¹⁷ This metric is extremely common in the software industry where “locking in” customers to a particular platform is far more valuable than the individual software sale.¹⁸ For example, one of the most hotly-contested computer markets is large-scale

¹⁶ Lemley, *supra* note 8, at 1896-97 (“The paradigmatic example is the telephone network, in which the value of the product is driven entirely by the number of other people on the same network.”). *See also* McKenzie, *supra* note 9, at 142-43 (discussing the value of interoperability and consistency in software industries).

¹⁷ *See* Lemley, *supra* note 8, at 1896 (“This is especially true in so-called “network markets,” where the value of a product to a particular consumer is a function of how many other consumers use the same (or a compatible) product.”); McKenzie, *supra* note 9, at 142-43 (“Network effects describe the value and utility of multiple complementary programs that are interoperable When more consumers use a particular network, more software programmers want to create programs that are interoperable with that network so they can sell more products.”) (internal citations omitted); Patrick D. Curran, *Standard-Setting Organizations: Patents, Price Fixing, and Per Se Legality*, 70 U. CHI. L. REV. 983, 986-88 (2003) (“Uniform product standards can increase the value of products for all consumers, creating a demand-side economy of scale (in other words, a market where consumer demand for a product increases as the product becomes more widely used).”). For a more detailed discussion of network effects, *see* McKenzie, *supra* note 9, at 142 n. 15.

¹⁸ This concept, commonly referred to as “vendor lock-in,” has proven quite controversial in the software arena, ensnaring some of the largest providers of ubiquitous technologies, from operating systems to portable music. *See* Bruce D. Abramson and Dmitri L. Mehlhorn, *The Fettered Liberty to Integrate: Legal Implications of Software Engineering*, 10 B.U. J. SCI. & TECH. L. 209, 220-22 (2004) (“Microsoft’s own developers reportedly often felt that the company sacrificed innovation for ‘strategy,’ the complex set of hooks and lock-in techniques that Gates invariably insisted on to steer customers toward Microsoft’s end-to-end product line and keep them from being able to [sic] competitive products.”) (internal citation omitted); David Adams, *Power Plays: The Phenomenon of Vendor Lock-in*, <http://www.osnews.com/printer.php/11029/Power-Plays--The-Phenomenon-of-Vendor-Lock-in> (last visited Nov. 15, 2006); Donna Higgins, *Antitrust Suit Against Apple Over iPod, iTunes to Proceed*, 23 No. 9 Andrews Computer & Internet Litig. Rep. 2; Siobhan Hughes, *Antitrust chief takes hands-off approach to Apple*, <http://www.marketwatch.com> (search “Antitrust chief takes hands-off approach to Apple”) (last visited Nov. 15, 2006).

mainframes/servers and the operating systems (“OS”) ¹⁹ they use, with the two primary operating systems being Windows and UNIX.²⁰ Neither OS is compatible with the other, meaning that software developed for one will not natively run on the other.²¹ Thus, when a customer adopts either one as a server, he effectively purchases the suite of software developed for that platform while locking himself out of using the bulk of those developed for the competitor. Thus, instead of the sticker price of the particular OS measuring the value of the purchase, the future purchases and upgrades associated with that software do so.

Part of the reason “network effects” is so common in the computer industry is the incredible rate at which the technology evolves, where “the life span of software programs is approximately one and a half years.”²² Groundbreaking software becomes obsolete

¹⁹ Operating systems manage system resources and programs that run on top of the system. Conceptually, the systems can be characterized as the computer’s spine, sending commands from other body parts (i.e. monitor, keyboard, mouse, hard drive/memory, CD-Rom drive, etc.) to the brain (i.e. the computer’s processor) and relaying the results back. Examples of common operating systems are Microsoft Windows, Mac OS X, Unix, and Linux.

²⁰ Unix, developed at AT&T Bell Labs in the 1960s and 1970s, is a non-proprietary operating system that became immensely popular at universities because of its robust features and scalability for handling the large mainframes commonly found at academic institutions, and with small start-up companies such as Sun Microsystems because of its low cost. Unix has historically been the most popular operating system found on company and college servers, though Microsoft has recently made inroads on this market dominance. *See The Creation of UNIX* Operating System*, <http://www.bell-labs.com/history/unix/> (last visited Nov. 25, 2006); Gregg Keizer, *Windows Steals Top Server OS From Unix*, <http://techweb.com/showArticle.jhtml?articleID=180206407> (last visited Nov. 15, 2006).

²¹ Companies can always create different versions of the same program to run on the different operating systems (for example, virus and firewall software suites have historically sold versions compatible with most popular operating systems), but the additional effort and resources necessary to realize this congruity forces many smaller companies to market their software for only one, limiting users of the operating systems from utilizing their product.

²² McKenzie, *supra* note 9, at 155 (citing Bruce H. Nearon, *Information Technology Security Engagements: An Evolving Specialty*, CPAJ., July 1, 2000, available at 2000 WL 12160867). A similar timeframe exists for computer hardware. *See* Gordon Irlam & Ross Williams, *Software Patents: An Industry at Risk*, <http://lpf.ai.mit.edu/Patents/industry-at-risk.html> (last visited Nov. 25, 2006). “[T]he software industry is developing much faster than other industries – even the computer hardware industry.” Irlam notes that while most industries have a ten to twenty year cycle for major innovation, software has a razor-thin cycle that can result in innovations spanning only a few years. *Id.* In fact, Moore’s law, which

and fossilized so quickly that an SSO's adoption would be effectively worthless if it were limited to a particular product instead of the underlying technology.²³ Plus, by adopting a base technology from which to work, SSOs are able to cut the surfeit of possible standards to a manageable list of compatible ones.

Symbiotic with this desire for an established base technology is another goal of both software developers and SSOs: interoperability. Interoperability "is achieved 'when information . . . can be exchanged directly and satisfactorily between' . . . two [or more] software programs," such as copying text from a document and pasting it into an e-mail with a few mouse clicks.²⁴ By producing code that can

holds that the complexity of microchips (i.e. the number of transistors used) will double every eighteen to twenty-four months, is representative of the software industry's drive in innovation. 6 Norton Bankr. L. & Prac. 2d § 141:31. This rapid advancement in technology, Irlam argues, makes the statutory patent term of seventeen years (at time of publishing, since raised to twenty years) excessive and inapplicable. Irlam & Williams, *supra*. The problem is that when an industry innovates at such a fantastic pace, patents morph from shields to anchors, and restrict progress; designers must seek out licenses for technologies that are not applicable per se to their current design, but are required for compatibility or legal issues only. *See id.* For example, the first widely-used graphical web browser, NCSA Mosaic (forbearer of Netscape), was released in 1993. *See generally* A History of Browsers, <http://www.quirksmode.org/browsers/history.html> (last visited Nov. 25, 2006). Within four years, Netscape was joined by Microsoft Internet Explorer (IE), Opera, and a slew of smaller graphical and text-based browsers. Today, only twelve years after Mosaic was released, a quick search of download.com's Internet browser directory lists at least thirty browsers for various operating systems/machines, including IE, Firefox, Safari, Netscape, Mozilla, and Opera. *See* "Internet Browsers," http://www.download.com/3150-2356_4-0-1-0.html? (last visited Oct. 31, 2005). Even worse, if patents were granted for "what might then have seemed non-obvious or esoteric technologies" at the time, such as graphical user interfaces ("GUI") or Internet protocols, they "would be extremely damaging today" as designers would be hamstrung by licensing requirements on now-ubiquitous technologies. *Id.* The above-mentioned plethora of internet browsers is a prime example, for if patents had been granted for the technology used in Mosaic, further innovation and maturation of the software would likely have been stunted by licensing concerns.

²³ In that same vein, this short timeframe makes it virtually impossible for companies to recoup their R&D, manufacturing, and marketing costs for the product from this single sale. They need the pipeline of funds that flow from the more generalized adoption of their brand in order to profit. *See* Curran, *supra* note 17, at 989 ("By establishing a technical baseline for incremental product improvements, firms are not required to duplicate the costs of creating the initial product, and can instead rely on a certain level of functionality among the existing product and related products.").

²⁴ McKenzie, *supra* note 9, at 142 (internal citation omitted).

integrate itself with the products currently on the market, a developer increases the chances that her software will gain acceptance and benefit from the aforementioned “network effects.”²⁵ Though an accepted standard inevitably “freezes out” those who resist adopting it,²⁶ the licensing of the standard “allows for ‘efficient exploitation of the intellectual property, benefiting consumers through the reduction of costs and the introduction of new products.’”²⁷ The hope is that the innovation and creativity employed in creating services for the industry will funnel non-standard products into similar material for the industry’s flagship.

Of course, whenever an SSO adopts a commercial standard from the general pool, cries of antitrust, stunted research and development,²⁸ and diminished returns by competitors are almost inevitable.²⁹ While some may view competitor claims as more alarmist than material, private SSOs must still consider these claims when promulgating standards, especially if the standards’ adoption provides a monopoly power to the owner due to limited competition.³⁰

²⁵ *Id.* at 142-43. For example, Microsoft Windows is the dominant OS found on laptops and desktops around the world. Because of this, most commercial software companies design their products so that they are fully interoperable with Windows in order to take advantage of the market dominance enjoyed by Microsoft, even if it means their products are not fully compatible with other operating systems such as Linux. When pushed, most “companies will often gear their production to work with a product that is an industry standard, rather than a product that has only a small market share.” Lemley, *supra* note 8, at 1896-97. See also Curran, *supra* note 17, at 998.

²⁶ The fluidity of the computer industry, though, tends to mitigate this effect somewhat. As shown earlier, there are multiple operating systems that users can choose, as well as a variety of processors on which to run the systems. Of course, there are limitations on the freedom to choose (e.g. different processors employ different instruction sets, meaning code written for an Intel chip will probably not work natively on a Power PC chip formerly used in Macs).

²⁷ McKenzie, *supra* note 9, at 150 (citing U.S. Dep’t of Justice and Fed. Trade Comm’n, Antitrust Guidelines for Collaborations Among Competitors (1999)).

²⁸ This occurs when access to the standard is restricted by its owner, making it difficult for others to create complementary or competing products.

²⁹ See McKenzie, *supra* note 9, at 150. See also Curran, *supra* note 17, at 997.; Joseph Farrell & Michael L. Katz, *The Effects of Antitrust and Intellectual Property Law on Compatibility and Innovation*, 43 ANTITRUST BULL. 609 (1998). “The particular economic realities of the modern economy, including the importance of product interoperability, the increasing significance of innovation, and the prevalence of network industries, have already begun to shape the policies of modern antitrust enforcers . . . [pushing them to] advocate antitrust policies that encourage increased innovation.” Curran, *supra* note 17, at 997.

³⁰ See McKenzie, *supra* note 9, at 150-52; Curran, *supra* note 17, at 998-1001.

Ultimately, though, the pro-competitive benefits of standardization eclipse these potential pitfalls; both private and public SSOs now adopt standards designed to benefit users, as opposed to using standards as a business tool to shut-out competition.

2. Safety and Quality Standards

Unlike their commercialized brethren, SSOs largely adopt safety and quality standards for the “intrinsic value of the product itself, and only secondarily with the network benefits of agreement on a particular standard.”³¹ These standards do not necessarily provide a commercial advantage to a particular designer or manufacturer, but adopt the most economical and safe product available in order to benefit users. This is particularly true if the process involves a government SSO, as such SSOs tend to be more nebulous, emphasizing the underlying technology more so than a particular brand. Finally, because they result from proactive steps taken by an SSO, they are generally classified as *de jure* standards.

3. Advantages and Disadvantages of SSOs in Software

a. Advantages

The biggest advantage with any SSO, but particularly in somewhat abstract fields like software, is the aforementioned interoperability among the standardized technologies.³² By promoting particular technologies to an industry, developers have a set of basic components from which to design, as well as some confidence that compliance with these standards will allow their products to compete in the marketplace.³³

With this tangible base from which to work, designers can also devote more time toward innovating products that will be useful to

³¹ Lemley, *supra* note 8, at 1897-98.

³² See Philip Weiser, *Internet Governance, Standard Setting, and Self-Regulation*, 28 N. KY. L. REV. 822, 836 (2001); McKenzie, *supra* note 9, at 139, 142-43; Clark, *supra* note 3, at 347-48. “Without standards, a technology cannot become ubiquitous, particularly when it is part of a larger network.” THE ECONOMIST, *supra* note 5.

³³ “Using the same underlying codes provides for enhanced innovation in a way because it allows software programmers the ability to sidestep the ‘reinventing the wheel’ portion of software development.” McKenzie, *supra* note 9, at 155.

consumers, thus serving one of the tenets of patent law.³⁴ More consumer-useful products also equates to more options in the marketplace for consumers, at least in the sense that there will be a reduced possibility of interoperability restrictions. Additionally, mass acceptance of the underlying technology means that the final product will likely be more robust and rigorously tested, as “[more] eyes on the work product should usually result in better quality.”³⁵

Finally, because standardized technologies must necessarily be clearly defined, they also provide precise boundaries around which others can design or augment. Like the incentive to design around inherent inpatentability, standardization gives innovators a clear blueprint of the scope of the current art and, perhaps most importantly, the end result their designs should strive to emulate. For example, the JPEG image format is the current de facto standard for images on the Internet primarily because of the high compression ratio and flexible image quality of the JPEG format. This power is derived largely from the algorithms utilized in the file’s creation, most notably the discrete cosine transform (“DCT”) formula.³⁶ For example, imagine a software developer who discovers an algorithm that she believes is more efficient at image compression than the standard and attempts to market it, either as a complement or direct substitute for the standard, established JPEG format. Because she knows the protocols and elements contained in the JPEG, this inventor can tailor her format to operate in the same browsers and programs as the standard³⁷ without fear that incompatibility issues will retard acceptance of her product.³⁸ Furthermore, if this format truly is more efficient and becomes the “new” JPEG standard, the fact that the inventor designed the new format with the legacy format in mind will greatly reduce compatibility issues with existing software and other concerns present in standards transition.

³⁴ For a general overview of the commonly-accepted incentives involved with patents, see Rebecca Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017, 1025-27 (1989); The Patent Prosecutor, Patent Economics: Part 4 – Incentives, http://www.patenthawk.com/blog/2005/04/patent_economics_part_4_incent.html#more (last visited Nov. 27, 2006).

³⁵ Clark, *supra* note 3, at 347.

³⁶ Compression, <http://memory.loc.gov/ammem/pictel/mddp308.htm> (last visited Nov. 27, 2006).

³⁷ For example, she declares that her protocol was “JPEG-compatible.”

³⁸ Making the elements of the standard known greatly reduces the risk of the standard-holder “freezing out” competing models by restricting knowledge of operable components.

b. Disadvantages

However, the interoperability trumpeted as a major incentive to standardize comes at a cost; namely, the industry must be willing and able to produce software that adopts these standards.³⁹ While at first glance this does not appear to be a major issue (companies would not promote a standard if they did not later implement it), it must be remembered that more than one consortium might populate a market, and membership is likely to be exclusive.⁴⁰ Each SSO will promote its own standard, though ultimately only one standard usually receives widespread adoption in the marketplace. Once the market adopts a standard, “[t]he competitors who have spent their time and money adopting the ‘obsolete’ standards will lose their sunk costs and will have to pay in order to license the new standard.”⁴¹

In this same vein, standardization of certain technologies might actually lead to a degradation in creativity and invention, as the ease of acceptance compared to the costs associated with forging a new path mutes the incentive to create.⁴² In other words, companies might decide it is less taxing to simply pay for a license than to fight the standard, resulting in a creative vacuum that will perpetuate any deficiencies and limitations inherent in the status quo.⁴³ As a result,

³⁹ “[In a networked market,] [m]ost companies need to cooperate with others to establish standards and create a single network of compatible users. But as soon as the ink is dry on the standards agreement, [they] shift gears and compete head to head . . . you cannot take it on faith that the other market participants truly want to establish a standard. . . .” Clark, *supra* note 3, at 349 (quoting CARL SHAPIRO & HAL R. VARIAN, *INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY*, 228 (Harvard Business School Press 1999)).

⁴⁰ See CIS, Fact Sheet, <http://www.interop.org/fact-sheet.html> (last visited Dec. 12, 2006); Oasis, Who We Are - Mission, <http://www.oasis-open.org/who/index.php> (last visited Nov. 25, 2006); T1, Committee T1 Overview, <http://www.atis.org/retiredcom.shtml> (last visited Nov. 27, 2005); VESA, VESA Mission, <http://www.vesa.org/About/mission.htm> (last visited Nov. 25, 2006); GCA, What is GCA?, <http://www.misrosoft.com/gca/whatisgca.html> (last visited Nov. 27, 2005).

⁴¹ McKenzie, *supra* note 9, at 155. See also Clark, *supra* note 3, at 348 (“Open standards remove a barrier to market entry. If you already have a defensible market share, you might not want to remove that barrier.”).

⁴² “Just as a *de facto* standard ends up creating a need for ‘leapfrog’ technology . . . , so do adopted standards. This need for leapfrog technology will effectively keep small start-up companies out of the market,” as they will lack the resources to compete with the established standard even if they have a “new, superior product.” McKenzie, *supra* note 9, at 155.

⁴³ This seems particularly likely in industries where a dominant player exists who has amassed such a “war chest” of market control that it virtually precludes others

“the technology will stay mainstreamed to the standard, thus bypassing innovation that is only possible with different underlying codes.”⁴⁴ Finally, any organization that relies on deliberations and acceptance by a group will necessarily suffer from hand-wringing and bureaucratic foot-dragging, creating a delayed acceptance of standards.⁴⁵ While such hindrances might be allowable in certain industries, the constant evolution and innovation that is the hallmark of software makes even minor delays extremely costly, ultimately resulting in standards that might not reflect the true state of the technology.⁴⁶

B. Formation and General Powers of Administrative Agencies

Administrative agencies have become essential elements in the American system of government, rising in influence following social and economic calamities such as the Great Depression. Furthermore, the duties of governance have become more complex so as to require the full-time attention of knowledgeable civil servants.⁴⁷ These agencies typically combine the powers characteristic of the three branches of government, a phenomenon that has drawn criticism that the agencies enjoy too much unrestrained power and, in so doing, violate principles of separation of powers.⁴⁸ For better or for worse, agencies can promulgate rules relating to pertinent issues affecting private parties without consulting directly with Congress, investigate potential violations of rules or statutes, and adjudicate such matters, imposing appropriate penalties.⁴⁹ This freedom should not be construed as complete autonomy, however, as the legislative,⁵⁰

from competing. *Id.*

⁴⁴ *Id.*

⁴⁵ See Clark, *supra* note 3, at 348 (“Consensus takes time. A neutral SDO with broad participation and a careful deliberative process might not be able to bring a new data structure to market rapidly enough to suit a vendor’s plans.”); See McKenzie, *supra* note 9, at 155.

⁴⁶ See McKenzie, *supra* note 9, at 155 (noting that the average life span for a software program is one and a half years).

⁴⁷ Jennifer Lumley-Hluska, *The Contest of “Contested Cases”: A Study on How the Connecticut Legislature’s Reading of Two Words May be Depriving You of Your Right to Judicial Review and Due Process of the Law*, 23 QUINNIPIAC L. REV. 1239, 1254 (2005).

⁴⁸ Pete Schenckan, *Texas Administrative Law: Trials, Triumphs, and New Challenges*, 7 TEX. TECH ADMIN. L.J. 287, at 293 (2006).

⁴⁹ *Id.*

⁵⁰ The legislature always enjoys the right to expand or retract the scope of an agency through subsequent legislation, as well as raise or cut funding depending on its performance and necessity. Such power has limits, however, as direct attempts to

executive,⁵¹ and judicial⁵² branches of the government can exert both official and unofficial oversight and review of these agencies. In addition, Congress enacted the Administrative Procedure Act in 1946 to standardize the public disclosure and participation requirements to which numerous government agencies, including the National Institute of Standards and Technology (“NIST”), must adhere.⁵³ That said,

invalidate agency rulings via “legislative vetoes” were invalidated by the Supreme Court as not conforming with Article I of the Constitution. *See INS v. Chadha*, 462 U.S. 919, 954 (1983). Congress may also exert unofficial control by requiring periodic reports from the agencies, reviewing their efficiency, and exerting public and political pressure through proposed legislation. Administrative Procedure Act, 5 U.S.C. § 551(14) (2006).

⁵¹ Since the President is empowered by the Appointments Clause of the Constitution (U.S. CONST. art. II, §2, cl. 2) to select federal officers to administrative agencies, he enjoys far-reaching oversight and influence. Like the legislature, the President may also influence the agencies through public and political pressure, as well as institute executive orders that can alter an agency’s goal or procedures. *Building and Const. Trades Dept., AFL-CIO v. Allbaugh*, 295 F.3d 28, 32-33 (D.C. Cir., 2002).

⁵² “A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof.” 5 U.S.C. §702 (2000). Though this right has been questioned at times, the Supreme Court has consistently upheld the right for judicial review of agency decisions and, on a grander scale, the delegation of judicial authority to an agency. *See Crowell v. Benson*, 288 U.S. 22 (1932), (allowing an agency to resolve workers’ compensation claims by maritime workers). *See also Thomas v. Union Carbide Agric. Prod. Co.*, 473 U.S. 568 (1985) (affirming the Environmental Protection Agency’s right to use an arbitrator to remedy a dispute between pesticide companies).

⁵³ Though a thorough discussion of the Administrative Procedure Act (“APA”) is unnecessary for the scope of this article, a brief discourse of the Act’s history and requirements will shed some light on the duties federal agencies owe to the government branches and the general citizenry. Codified as 5 U.S.C. §500 (2000), the APA was “framed against a background of rapid expansion of the administrative process as a check upon administrators whose zeal might otherwise have carried them to excesses not contemplated in legislation creating their offices. It created safeguards even narrower than the constitutional ones, against arbitrary official encroachment on private rights.” *United States v. Morton Salt Co.*, 338 U.S. 632, 644 (1950). This “zeal” was most pronounced in the adjudicative wings of these agencies, where the muddled distinction between formal and informal adjudication troubled those required to comply with these agencies’ mandates. *See PETER WOLL, ADMINISTRATIVE LAW – THE INFORMAL PROCESS* 20-21 (University of California Press 1974) (1963). Not surprisingly, the APA’s enactment was “[w]idely hailed as the most important enactment of the century in administrative law.” *Id.* This praise stemmed largely from the Act’s clear communication of the duties and limitations of an agency’s hearing examiners and commissioners, which left “little doubt in the minds of those who deal with the various commissions that the examiners are independent and not subject to the whims of the commissioners.” *Id.* This

these agencies are still treated much like a clockmaker handles a new watch: the agencies are set to the proper values, wound up for energy, and then left alone except for occasional recalibrations. The assumption is that agencies' design and limited duties will guide them toward the correct goal without significant deviation.

1. The National Institute of Standards and Technology

A congressional directive created the NIST in 1901 to address the growing need for technology standards in America. Originally called the National Bureau of Standards, the NIST served as the "first physical science research laboratory of the federal government."⁵⁴ The agency's task was to aggregate the regionalized, and oftentimes confusing, standards that existed across the country into a consistent, universal system in line with those established in other industrialized nations.⁵⁵ Previously, these localized standards hamstrung commercial growth both nationally and internationally because the products were of inconsistent quality and were sometimes incompatible with products from other markets.⁵⁶ Over time, the NIST was able to implement precise standards in a variety of fields,

separation is essential for proper agency administration, for "once such independence has been destroyed, the prosecuting arm of the agency can easily influence adjudicative decisions." *Id.* at 21. Another key element of the APA is that the regulations and procedural steps of administrative agencies must be made public. 5 U.S.C. §552 (2000), amended by the Freedom of Information Act, requires all agencies to "separately state and currently publish in the Federal Register for the guidance of the public" an expansive list of documents associated with the agency's inner workings, including procedures, judgments of cases, and policy determinations. 5 U.S.C. §552(a). In addition, 5 U.S.C. §552(b) specifies what meetings and agency proceedings must be publicly available for review and comment. This transparency is particularly important in organizations like NIST that rely on external submissions and interaction in order to fulfill its administrative duties. See THE U.S. CERTIFICATION SYSTEM FROM A GOVERNMENTAL PERSPECTIVE (NISTIR 6077) (Oct. 1997), available at <http://ts.nist.gov/Standards/Conformity/govcer.cfm> (last visited Oct. 21, 2006).

⁵⁴ See National Institute of Standards and Technology (NIST), The Founding, <http://www.100.nist.gov/founding.htm> (last visited Oct. 21, 2006).

⁵⁵ *Id.*

⁵⁶ Scientists and engineers, particularly abroad, often complained about the wildly inconsistent standards found in America prior to the NIST. *Id.* "One complained, for example, that he had to contend with eight different 'authoritative' values for the U.S. gallon." *Id.* Further testimony to this need occurred in 1904, when 1,500 buildings in Baltimore, Maryland burned to the ground because the fire hose couplings on fire trucks from Washington D.C and New York, amongst others, were not compatible with hydrants in the city. *Id.*

such as electricity, mass, time, and temperature, and has retained a leading role in shaping the country's technological maturation and global renaissance ever since.⁵⁷

There are a number of specialized departments within the NIST that review current technologies and standards in a variety of fields, including CARB (Center for Advanced Research in Biotechnology),⁵⁸ AML (Advanced Measurement Laboratory), and MEL (Manufacturing Engineering Laboratory).⁵⁹ In particular, there has been significant growth in the number and scope of departments dedicated to hardware and software in recent years, with the Information Technology Laboratory ("ITL") leading the charge.⁶⁰ Within the ITL, divisions such as the Software Diagnostics & Conformance Testing Division ("SDCT") and the Computer Security Division ("CSD"), seek to provide standardized benchmarks, technologies, and testing suites for software developers in a variety of fields, including XML⁶¹ data handling and digital cryptography.⁶² By

⁵⁷ The NIST has been involved in virtually all technological (and social) advances over the past 100 years, from the popularization of radios, the standardization of building and plumbing equipment, and aeronautics. *See generally* NIST, Centennial Home Page, http://www.100.nist.gov/cent_toc.htm (last visited Oct. 21, 2006). In addition to standardization, the NIST has been involved in the discovery and commercialization of numerous inventions and phenomena, including uranium fission, electronic circuit design, medical tools such as blood pressure and heart rate monitors, and computers (most notably the ASCII text format). *See* Postwar Years, www.100.nist.gov/postwar.htm (last visited Oct. 21, 2006). *See also* The Space Age, www.100.nist.gov/spaceage.htm (last visited Oct. 21, 2006).

⁵⁸ The NIST CARB is not to be confused with the California Air Resources Board, a state-run SSO.

⁵⁹ For a complete list, *see* NIST, A-Z Subject Index, http://www.nist.gov/public_affairs/siteindex.htm (last visited Oct. 21, 2006).

⁶⁰ ITL's most notable duties include "formulating metrics, tests, and tools for a wide range of subjects such as information complexity and comprehension, high confidence software, space-time coordinated mobile and wireless computing, as well as issues of information quality, integrity, and usability" and determining cybersecurity standards and techniques under the Federal Information Security Management Act. *See* ITL, What ITL Does, http://www.itl.nist.gov/itl-what_itl_does.html (last visited Oct. 21, 2006).

⁶¹ Short for eXtensible Markup Language.

⁶² Andres Rueda, *The Implications of Strong Encryption Technology on Money Laundering*, 12 ALB. L.J. SCI. & TECH. 1, at 7 (2001). Cryptography is a technology that disguises messages using codes, ciphers, and algorithms, so that only the intended recipient can access its meaning. CSD, Mission, <http://csrc.nist.gov/mission.html> (last visited Nov. 15, 2006). For obvious reasons, the federal government is quite interested in this field, with one of the CSD's goals being to "establish minimum security requirements for Federal systems. *Id.*

providing these tools and standards, the NIST is able to exert substantial influence on the computer industry to produce quality software that will be interoperable with both legacy code and future releases.

2. The American National Standards Institute

As one would expect, the costs associated with developing such technologies are generally too great for the NIST alone to finance, so the Institute often relies on SSOs to voluntarily submit standards for federal approval.⁶³ These suggestions, called Federal Information Processing Standards (“FIPS”), are published in numerous reporters and websites,⁶⁴ subjected to between thirty and ninety days of public comment, revised if necessary, and then finally adopted.⁶⁵

Most of these suggestions arrive either directly or indirectly from the American National Standards Institute (“ANSI”), which serves as the “administrator and coordinator of the United States private sector voluntary standardization system.”⁶⁶ Though not an official government department like the NIST, ANSI is highly influential and its standards, in most instances, are adopted by the NIST with few reservations.⁶⁷ This imprint was further augmented in 1996 when Congress amended the National Technology Transfer and Advancement Act to require the NIST to “coordinate the use by Federal agencies of private sector standards, emphasizing where possible the use of standards developed by private, consensus organizations” instead of unique government-produced standards.⁶⁸

The membership of ANSI is comprised chiefly of smaller SSOs focusing on a specific field, and acceptance by ANSI is proof

⁶³ NIST, <http://www.itl.nist.gov/fipspubs/geninfo.htm> (last visited Nov. 15, 2006). “In accordance with the National Technology Transfer and Advancement Act of 1995 . . . NIST supports the development of voluntary industry standards both nationally and internationally as the preferred source of standards to be used by the Federal government.” *Id.*

⁶⁴ *Id.* FIPS are published in the *Federal Register* and on the NIST and Chief Information Officers Council’s websites. *Id.*

⁶⁵ *See id.*

⁶⁶ ANSI Introduction, http://www.ansi.org/about_ansi/introduction/introduction.aspx?menuid=1 (last visited Nov. 15, 2006) [hereinafter ANSI Introduction].

⁶⁷ *See* ANSI Introduction, *supra* note 66; McKenzie, *supra* note 9, at 146 (2002) (“[ANSI] is the group that coordinates all the standard-setting consortia in the country, ultimately trying to establish a consensus for the NIST.”).

⁶⁸ H.R. 2196, 104th Cong. (1996).

that the proffered standard meets “the Institute’s essential requirements for openness, balance, consensus and due process.”⁶⁹ Beyond national standards, ANSI acts as the face of the United States in international standardization matters, with membership in both the International Organization for Standardization (“ISO”) and the International Electrotechnical Commission (“IEC”), two powerful international consortia.⁷⁰ Much like the NIST, ANSI utilizes a multi-tiered approach to standard accreditation, with suggested technologies published, reviewed by interested parties, and then finally accepted after the adoption of any amendments.⁷¹

3. SSOs: Composition and Patent Policies

Critics argue that ANSI’s procedure, while consistent and systematic, fails to address or compensate for the greatest variable involved in a standard’s creation—the composition and intent of the SSOs involved. In general, SSOs are independent groups of varying autonomy within a given industry, with voluntary membership usually culled from for-profit companies within the industry. There is little oversight on membership beyond who shows up and pays the consortium’s dues,⁷² meaning “most . . . are open to anyone who wishes to join.”⁷³ While this approach may be viewed as encouraging a wide array of viewpoints that might enrich any standardization discussion,⁷⁴ critics counter that this viewpoint is too myopic. They

⁶⁹ ANSI Introduction, *supra* note 66.

⁷⁰ *See id.*

⁷¹ *See id.*

⁷² The vast majority of SSOs, such as W3C (<http://www.w3c.org/Consortium/fees>), OASIS (<http://www.oasis-open.org>), and The Open Group (<http://www.opengroup.org>), require dues varying from a few thousand dollars to \$60,000 or more per year, and have scheduled meetings and provide updates to members of relevant issues in the field. A smaller subset such as the Internet Engineering Task Force (IETF) (<http://www.ietf.org>) is due-free and, not surprisingly, far less organized. *See* Scott Bradner, *The Internet Engineering Task Force*, in OPEN SOURCE: VOICES FROM THE OPEN SOURCE REVOLUTION (Chirs DiBona, Sam Ockerman & Mark Stone eds. 1999), available at <http://www.oreilly.com/catalog/opensources/book/ietf.html> (“The IETF can be described as a membership organization without a defined membership.”); Clark, *supra* note 3, at 350 n.10.

⁷³ Clark, *supra* note 3, at 350.

⁷⁴ *Id.* at 372. (“[SSO members] were in one sense disinterested in the outcomes: they wanted to produce nothing more than code that would work.”) (quoting LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE 207 (BASIC BOOS 1999)).

argue that a world “where standards are the product of competition; where standards tied to a dominant standard have advantages,” and companies constantly jockey for position has long replaced benevolent and altruistic programmers seeking compatibility.⁷⁵ Emblematic of this fundamental shift is the fact that some of the biggest software companies in the world (IBM, Hewlett Packard, and Sun Microsystems, to name a few) are voting members of influential SSOs and have shown propensities to push for adoption of their own technologies as a means of advancing their respective market shares.⁷⁶

Perhaps to combat these concerns of favoritism and commercial influence, many SSOs have adopted definitive policies concerning standards that incorporate patented technologies owned by members.⁷⁷ Though each organization employs its own system tailored to the SSO’s market and purpose, most can be categorized as forced disclosure, forced licensing, or a combination of the two.⁷⁸ Forced disclosure is a preemptive doctrine applied prior to the standard’s acceptance, while forced licensing of patents takes effect after the fact.

A forced disclosure policy “requires disclosure of information regarding patents that might apply to the technology being specified by the standards working group,” with both the standard’s submitter

⁷⁵ *Id.* (“We are entering a world where code is corporate To the extent that this code is law . . . we should worry about how it is structured and whose interests may define its constraint If code is law, who are the lawmakers?”) (quoting LAWRENCE LESSIG, *CODE AND OTHER LAWS OF CYBERSPACE* 207 (Basic Books 1999)).

⁷⁶ See Lemley, *supra* note 8, at 1906-07 (“[I]n 1998 Sun Microsystems participated in eighty-seven different SSOs); McKenzie, *supra* note 9, at 145; Weiser, *supra* note 32, at 831 (stating as companies push for commercialization within these organizations, “the stakeholders in the future...become more...concerned with...profits, stable, open, and end-to-end-based standards may well become the exception, not the norm.”). See generally The Economist, *supra* note 5 (arguing that while standards are becoming increasingly “open,” companies such as Sun are still quite weary of their proffered standards losing market relevance through too much public augmentation).

⁷⁷ For a detailed discussion of various SSOs’ policies, see Lemley, *supra* note 8, at 1973-75 (Appendix).

⁷⁸ See Bruce Perens, The Problem of Software Patents in Standards, <http://perens.com/Articles/PatentFarming.html> (last visited Nov. 25, 2006). See generally W3C Patent Policy, <http://www.w3.org/Consortium/Patent-Policy-20040205/> (last visited Dec. 12, 2006); Guidelines for Implementation of the ANSI Patent Policy, <http://www.niso.org/committees/OpenURL/PATPOL.pdf> (last visited Nov. 25, 2006); IEEE, IEEE-SA Standards Board Operations Manual, §6 Copyrights, Trademarks and Patents, <http://standards.ieee.org/guides/opman/sb-om.pdf> (last visited Nov. 25, 2006) [hereinafter *IEEE Manual*].

and working group members identifying patents incorporated in the proposed technology.⁷⁹ These proactive revelations, usually coupled with additional patent searches by the SSO, are intended to inform members of all potential legal issues before standard ratification.⁸⁰ The linchpin of this theory, though, is that the interested members will be inclined to disclose conflicting patents and applications to the members, a tall order considering the financial stakes involved in technology standardization and the limited recourses the organization can take.⁸¹

By comparison, forced licensing applies when use and ownership of a patent incorporated in an accepted standard becomes an issue, with the usual remedy being that the owner must license the technology to fellow consortium members on predefined terms.⁸² These terms can vary significantly, ranging from royalty-free to purely non-discriminatory in price, meaning every member pays the same fee.⁸³ Historically, “reasonable and non-discriminatory” (“RAND”)⁸⁴

⁷⁹ Perens, *supra* note 78.

⁸⁰ *See id.* In addition, the SSOs will require members to license undiscovered patents at a reasonable rate. *Id.*

⁸¹ *See id.* Of course, sometimes members will proactively disclose their patents for a variety of reasons. IBM, the nation’s largest patent holder, recently announced that the company would begin publishing its patent application when filed, promoting an open discussion of prior art as well as place other interested parties on notice of its pending claims. Steve Lohr, *Hoping to Be a Model, I.B.M. Will Put Its Patent Filings Online*, N.Y. TIMES, Sept. 26, 2006, at C5. This proposed public review process has spurred on other companies, including Microsoft, General Electric, and Intel, to agree to publish some of their applications. *Id.* Of course, the argument can be made that large companies are usually not the main culprits of patent enforcement “malaise,” but instead are usually the victims of this practice. Thus, unless this proactive step spurs on a more industry-wide evolution, it may ultimately prove to be nothing more than a new coat of paint on a rusty car.

⁸² Perens, *supra* note 78.

⁸³ *Id.* Though ostensibly fair, a flat fee can actually discriminate against small companies and Open Source members of an SSO when the cost is too great to bear. *See id.*

⁸⁴ W3C Patent Policy Framework § 4(e), <http://www.w3.org/TR/2001/WD-patent-policy-20010816/#sec-definitions> (last visited Nov. 27, 2006). This policy features some key requirements to provide equitable and uniform fees. *Id.* Most important of these are the policy’s requirements that licensing be available to all implementers of the standard irrespective of their membership in a given SSO and conditioned on reciprocity, and that licensing cannot “impose any further conditions or restrictions on the use of any technology” beyond those enumerated in the license. *Id.* *See also IEEE Manual, supra* note 78, § 6.3.1 (“The following notice shall appear when the IEEE receives assurance from a known patent holder or patent applicant prior to the time of publication that a license will be made available to all applicants either without compensation or under reasonable rates, with reasonable

nomenclature embodied the most contentious terms, which vary licensing fees depending on each user's characteristics.⁸⁵ Beyond fiduciary conditions, forced licenses can also limit the implementation of the patented material to the standard itself, as opposed to any use of the technology, and in some extreme cases can lead to the dissolution of the standard if the licensing issues are unresolved.⁸⁶

Of course, all of these licensing systems and "patent-protected" standards have a major caveat: "standards organization policies are not legislation," and thus lack enforcement power on patent holders who are non-members.⁸⁷ While organizations can certainly pressure these reticent holders in a variety of ways (e.g., ANSI/NIST accreditation of a standard is publicly and financially important in some industries, so denial or rescission could be quite influential), there remains the possibility that a patent holder could extract sizable licensing and infringement fees from implementers of a standard without any legal repercussions. Furthermore, because of the voluntary nature of these SSOs, there are only limited remedies against members who display similar reservations about disclosure and licensing, usually in the form of fines and dismissals.⁸⁸ Thus, while SSOs and their patent policies are certainly making headway toward producing truly open standards, a number of fundamental barriers remain.

III. *LEMPEL-ZIV-WELCH, RAMBUS*, AND THE HIDDEN COSTS OF PATENTED STANDARDS

This discussion of the benefits and weaknesses surrounding patents and their subversive effects on software standardization, like

terms and conditions that are demonstrably free of any unfair discrimination") and ISO Standards Development, ISO/IEC Standards and Patents, <http://isotc.iso.org> (search "ISO/IEC Standards and Patents.") (last visited Nov. 27, 2006) (noting that in order to "ensure that the standards can be applied and used worldwide on a fair and equitable basis, ISO and IEC need to receive from the owners of such rights, statements that they are willing to grant licenses to applicants worldwide on reasonable and non-discriminatory terms" that incorporate patented technology).

⁸⁵ W3C Patent Policy Framework, *supra* note 84. For example, an Open Source or freeware software developer might be granted a royalty-free license while a proprietary developer would be charged a standard royalty fee. This discretionary payment system has led some to complain that commercial developers are being unfairly discriminated against without just cause. See Lemley, *supra* note 8, at 1906.

⁸⁶ See Perens, *supra* note 78.

⁸⁷ *Id.*

⁸⁸ SDOs "are by definition voluntary, so they have few binding remedies with which to work." Clark, *supra* note 3, at 371-72.

many policy arguments, would be nothing more than excited rhetoric without examples that embodied these concerns. What follows are two recent examples of the dilemmas that can arise when standardization runs afoul of patented technologies, in particular when SSOs do not disclose intellectual property to the public until the SSOs adopt the standard. The first case concerns the owner of the patented compression algorithm incorporated in the popular GIF image format, which became the de facto standard for images on the Internet, and the decision to seek licensing dues from users years after the standard was established. The second illustration concerns Rambus Inc., a designer of computer memory that promoted a standard incorporating technology on which the company had pending patents. Once the SSO adopted the standard, however, Rambus modified its patent applications so that the company's claims then covered the standard, allowing Rambus to derive licensing fees and enforce other intellectual property rights against unwitting users.

A. *The Lempel-Ziv-Welch Compression Algorithm*

For the software industry, a cautionary tale goes by the three-letter acronym LZW (short for Lempel-Ziv-Welch, the algorithm's inventors), and its mere mention tends to elicit disdain and scorn. Though the offending patent expired on June 20, 2003,⁸⁹ it remains the archetype of the dangers of privately-held software patents being incorporated in mass-produced code or standards, as well as a veritable blueprint of the patent process.

The LZW patent is a compression algorithm that creates a dictionary index of common strings found in a file, with each large entry in the dictionary represented by a much smaller "placeholder" value.⁹⁰ While similar compression methods already existed (such as LZ77⁹¹ and LZ78⁹²) prior to its creation, LZW was seen as an

⁸⁹ LZW Patent and Software Information, http://www.unisys.com/about__unisys/lzw (last visited Nov. 27, 2006).

⁹⁰ For more information about the LZW algorithm, see Martin Campbell-Kelly, *Not All Bad: An Historical Perspective on Software Patents*, 11 MICH. TELECOMM. & TECH. L. REV. 191, 226 (2005), available at <http://www.mttl.org/voleleven/campbell-kelly.pdf>; Michael C. Battilana, *The GIF Controversy: A Software Developer's Perspective*, June 20, 2004, <http://www.cloanto.com/users/mcb/19950127giflzw.html> (last visited Dec. 29, 2005).

⁹¹ LZ77 relied on a sliding window in which duplicate strings would be compressed down. This method is still used in most archival file formats, such as ZIP, RAR, etc. Stuart Caie, *Sad Day . . . GIF Patent Dead at 20*, July 28, 2003,

extremely efficient method for compressing image files because of their repeating nature and small number of possible values (in the mid-1980s, most images were limited to 256 colors). On December 10, 1985, the Patent Office issued patent 4,558,302 “High speed data compression and decompression apparatus and method” to the Sperry Corporation, which later became known as Unisys.⁹³

While facially this seemed innocuous, problems arose because Terry Welch, the algorithm’s chief inventor, had already published an article approximately a year earlier detailing LZW and its usage in *IEEE Computer* magazine, a popular periodical at the time.⁹⁴ Though the article mentioned that the implementation was proprietary, it never explicitly stated that a patent was pending on the algorithm and did little to dispel the notion that the algorithm was free to readers.⁹⁵ One of the many adopters of LZW was CompuServe Inc., a fledgling software company that incorporated the compression algorithm into its free image format, GIF. From 1987 to 1994, GIF became the global standard image format for websites, with neither CompuServe nor Unisys addressing the unlicensed use of the LZW algorithm that GIF embodied.⁹⁶ As GIF’s usage proliferated, so did this silence, until December 24, 1994, when Unisys and CompuServe jointly announced the companies would require developers to pay royalties on the LZW algorithm.⁹⁷ The thrust of this licensing was on software developers who used the algorithm in their products;⁹⁸ yet, uncertainty and debate

<http://www.kyz.uklinux.net/giflzw.php> (last visited Nov. 25, 2006).

⁹² LZ78 used the same dictionary method as LZW, but was less efficient and never obtained widespread acceptance. *Id.*

⁹³ *Id.*

⁹⁴ Terry A. Welch, *A Technique for High-Performance Data Compression*, IEEE COMPUTER, June 1984, <http://sochi.net.ru/~maxime/doc/welch.shtml> (last visited Nov. 25, 2006).

⁹⁵ See Caie, *supra* note 91. Also, note that since patents on software were recognized only a few years earlier, many of the readers at the time probably did not even consider the possibility that the algorithm was patentable.

⁹⁶ See *id.*; see also Battilana, *supra* note 90.

⁹⁷ See Caie, *supra* note 91. Some of this delay by Unisys/CompuServe in enforcement was attributed to the difficulty in identifying infringing uses. “The world was a lot less ‘wired’ in 1994, a Unisys lawyer couldn’t enter ‘LZW’ into the Google search engine and come up with thousands of infringers in a single stroke.” *Id.*

⁹⁸ There was some concern that the patent covered the GIF format itself, which was not the case. In a press release by CompuServe, it was made clear that “[f]or people who view GIF images, who keep GIF images on servers, or who are creating GIF images for distribution, the recent licensing discussions have no effect on their activities.” Battilana, *supra* note 90.

raged over what GIF usage necessitated a license and the rights granted.

What was troubling about this ordeal was not that Unisys owned a patent on the LZW algorithm, but that myriad programs and file formats incorporated the algorithm without any apparent patent holder or user knowledge.⁹⁹ Furthermore, the problem only became publicly known after these uses, particularly GIF, became ubiquitous in public use. Not surprisingly, users felt ambushed¹⁰⁰ by this revelation, and efforts were made to bypass the GIF format either by replacing the LZW algorithm with another,¹⁰¹ or creating a completely new image format, culminating in PNG.¹⁰² The problem remained, though, that GIF was the most widely accepted image format in computing. Even though the W3C¹⁰³ (the Internet's standard-setting body) had "officially endorsed the PNG specification as a 'W3C Recommendation,'" Netscape and Microsoft (among others) provided more robust support for GIF in their browsers.¹⁰⁴ Ultimately, a number of software companies were forced to license the LZW algorithm from Unisys, resulting in millions of dollars in fees over the years.¹⁰⁵ While the industry-wide Armageddon many first envisioned

⁹⁹ Starting in 1989, some computer magazines and software manuals using the algorithm (such as *PC Week* and the *PostScript Language Reference Manual*) ran letters and stories noting that the LZW patent was owned by Unisys, meaning "at least the readers of some publications were potentially aware of the LZW patent. But still, there were few links to GIF." Battilana, *supra* note 90.; *see also* Caie, *supra* note 91.

¹⁰⁰ Though certainly rich with hyperbole, one poster on a popular BBS forum said the LZW enforcement was "the online communications community's equivalent of the sneak attack at Pearl Harbor." Battilana, *supra* note 90.

¹⁰¹ Some developers tried to replace LZW with different data structures and procedures such as Shannon-Fano or AVL Trees, but were rebuffed when it became clear that "[i]f the output data is [compressed] GIF, the compressor infringes the Unisys patent regardless of the algorithm." Battilana, *supra* note 90. More successful were attempts to create different (though not always compatible) image formats, such as JPEG, Unisys's own free GIF24, and GEF. *Id.*

¹⁰² Which was a culmination of GIF24 and GEF formats, officially short for "Portable Graphics Network," or colloquially for "Png is Not Gif." *Id.*

¹⁰³ W3C is short for World Wide Web Consortium.

¹⁰⁴ Battilana, *supra* note 90.

¹⁰⁵ Though the GIF patent might be the most famous example of this phenomenon, the patent certainly is not unique for its underlying principles or its huge financial implications. One example is the ongoing litigation between Eolas Technologies, Inc. and Microsoft. Eolas claims to have invented the technology behind embedded files and applications in websites (e.g. loading a Flash application or PDF in a browser window), and sued Microsoft for infringement related to IE's use of this plug-in technology via Microsoft's ActiveX libraries. With IE's

never materialized, the GIF controversy served as a microcosm of the dangers of hidden patents in standards and the potential of a single company to take the software industry hostage.¹⁰⁶

Perhaps the biggest surprise surrounding the LZW/GIF controversy was that the matter never went to court, most likely because there were few, if any, legal doctrines with which a party could charge Unisys. There was no obvious fraud or duplicitous action by Unisys in the standard's adoption, as the community embraced the GIF format through usage with little impetus by Unisys. At worst, Unisys's greatest sin was the company's failure to provide proper notice of the patent to users as they adopted the technology; the company waited years before it enforced its patent rights.¹⁰⁷ Even that

dominant market share of internet browsers (accounts vary, but most agree at least 85% of the market), this technology became a de facto standard in the industry. Though it has since been appealed and remanded, Eolas actually won a \$521 million settlement for this apparent infringement. *Eolas Tech., Inc. v. Microsoft Corp.*, 2004 U.S. Dist. LEXIS 534 (N.D. Ill. Jan. 15, 2004), *vacated in part*, 399 F.3d 1325 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 568 (Oct. 31, 2005). *See also* Paul Festa, *The Eolas-Microsoft case--patent ending?*, CNET News.com, March 16, 2004, http://news.com.com/2100-1032_3-5173287.html (last visited Nov. 27, 2006). Such a settlement could lead to exorbitant licensing agreements by browser companies if upheld.

¹⁰⁶ A similar scenario occurred in 2002, when Forgent Networks informed users of the JPEG image format (the de facto successor to GIF) of the company's claimed patent rights and began seeking licensing fees. Though Forgent, which received the patent when the company purchased Compression Labs in 1997, was able to obtain over \$90 million in licenses and lawsuits from users, a consortium of twenty-one major computer companies, including Microsoft, brought countersuit seeking the invalidation of the patent because of prior art. Though the patent itself expired in 2006, the lawsuit has yet to be resolved. *See* Amit Asaravala, *Forgent Sues Over JPEG Patent*, Wired News, http://www.wired.com/news/business/0,1367,63200,00.html?tw=wn_tophead_1 (last visited Nov. 27, 2006); Stephen Lindholm, *Marking the Software Patent Beast*, 10 STAN. J.L. BUS. & FIN. 82, 108 (2005).

¹⁰⁷ A number of defenses do exist in patent law against a patentee who does not make her patent rights known to users for extended periods of time, but each has limitations that make their implementation a more troubling process than perhaps it should be. The leading defense is called "laches," which was used successfully in both *A.C. Aukerman Co.* and *Odetics, Inc.* to protect the plaintiffs against these disclosures. *A.C. Aukerman Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020 (1992), *on remand* 1993 U.S. Dist. LEXIS 17101 (N.D. Cal. 1993); *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259 (Fed. Cir. 1999). The concept of laches is codified in 35 U.S.C. §282, which provides the defense against patent infringement if one can show that the charging party undertook unnecessary delay in disclosing its patent claims to the infringing party. *A.C. Aukerman Co.*, 960 F.2d at 1028. In *A.C. Aukerman Co.*, the Northern District of California found that the defense applied

oversight might have been unintentional, since “[t]he world was a lot less ‘wired’ in 1994” compared to today, meaning that a “Unisys lawyer couldn’t enter ‘LZW’ into the Google search engine and come up with thousands of infringers in a single stroke. Unisys had, in fact, been licensing big LZW infringers that it discovered in its own field of work.”¹⁰⁸

B. *The Rambus Dynamic RAM Design*

This apparent ignorance, coupled with Unisys’s “hands-off” involvement in GIF’s de facto standardization likely precluded litigation. Yet, the courts have displayed reservations in sanctioning a patentee’s subsequent infringement claims when a company is instrumental in an SSO’s adoption of the company’s technology but remains silent about potential intellectual property rights, as was the case in *Rambus, Inc. v. Infineon Tech. AG*.¹⁰⁹

provided that “[t]he patentee, through misleading conduct, leads the alleged infringer to reasonably infer that the patentee does not intend to enforce its patent against the alleged infringer,” “[t]he alleged infringer relies on that conduct,” and “[d]ue to its reliance, the alleged infringer will be materially prejudiced if the patentee is allowed to proceed with its claim.” *Id.* While a valid patent allows the patent holder to exclude others from using the patented technology, the court “[was] not [going to] assist one who has slept on his rights.” *Odetics, Inc.*, 185 F.3d at 1273. A less powerful offshoot of this general laches defense is called “prosecution laches,” which is “a defense to an infringement action involving new claims issuing from divisional and continuing applications that prejudice intervening adverse public rights.” *Symbol Tech., Inc. v. Lemelson Med., Ed. & Research Found., LP*, 277 F.3d 1361, 1364 (Fed. Cir. 2002). As the definition denotes, though, this defense only applies to *pending* patents prior to their issuing. In *Symbol Tech., Inc.*, for example, appellee Lemelson originally filed patent applications for a technology used in bar code readers in 1950 when no such devices existed, kept filing divisional and continuance motions to update the technologies in his applications as the industry matured, and then had the patents filed in the 1970s and 1980s so that he could sue the patent’s users. *Id.* at 1363-64. The Federal Circuit ultimately ruled that prosecution laches was a valid defense against Lemelson because of the extreme delay between filing and issuance of his patents, and remanded the matter for further deliberations. *Id.* at 1368; *see also* Krebs, Robert and W. Samuel Niece, *Prosecution Laches: Lemelson Bar Code and Machine Vision Patents Held Unenforceable*, FindLaw.com, <http://library.findlaw.com/2004/May/11/133416.html> (last visited Feb. 17, 2006). By comparison, there is no evidence that Unisys unnecessarily delayed the issuance of the LZW patent or attempted to cover up its existence prior to the enforcing of its rights.

¹⁰⁸ Caie, *supra* note 91. *See also* Battilana, *supra* note 90 (“Unisys apparently didn’t know about GIF, nor did most GIF developers know that GIF contained LZW technology.”).

¹⁰⁹ 318 F.3d 1081 (Fed Cir. 2003), *cert. denied*, 540 U.S. 874 (2003). For a more

1. Background

Rambus is a leading designer of personal computer memory, and licenses these technologies for production by high-speed chip manufacturers, such as Infineon.¹¹⁰ In April of 1990, Rambus filed a patent for technologies associated with dynamic random access memory (“DRAM”), the most common memory design used in modern personal computers.¹¹¹ After the Patent and Trademark Office (“PTO”) issued an eleven-way restriction requirement,¹¹² Rambus filed at least 31 divisional and continuation applications that came to incorporate various elements of the DRAM technology, as well as a Patent Cooperation Treaty (“PCT”)¹¹³ claiming priority for this patent.¹¹⁴

While these patents were pending, Rambus joined Joint Electron Devices Engineering Council (“JEDEC”), “a leading developer of standards in the solid-state industry,”¹¹⁵ in 1992 and began working with committee JC-42.3, the JEDEC’s appendage for adopting random access memory standards.¹¹⁶ While Rambus periodically attended meetings, JC-42.3 adopted two memory

detailed background and analysis of this lawsuit, see David Alban, *Rambus v. Infineon: Patent Disclosures in Standard-Setting Organizations*, 19 BERKELEY TECH. L.J. 309, 320 (2004); Andy Updegrave, *Rambus – Hard Cases Make Bad Law*, <http://www.consortiuminfo.org/bulletins/feb03.php#editorial> (last visited Dec. 12, 2006). [hereinafter *Updegrave Hard Cases*]

¹¹⁰ *Rambus*, 318 F.3d at 1084. Rambus does not manufacture the actual memory modules, but instead provides the schematics and technologies behind their design.

¹¹¹ *Id.*

¹¹² A restriction requirement occurs when the patent examiner feels two or more distinct inventions are encompassed in a single claim, which violates the “one invention per claim” requirement for patent applications. See U.S. Dep’t of Commerce, Patent and Trademark Office, Manual for Patent Examining Procedure §§ 809.02(a), 818 (2005) (8th ed. 2001), <http://www.uspto.gov/web/offices/pac/mpep/documents/front.htm> (last visited Dec. 12, 2006) (providing the PTO’s official stance on this procedure).

¹¹³ A Patent Cooperation Treaty is an application to the Intellectual Property Organization.

¹¹⁴ *Rambus*, 318 F.3d at 1084-85. Divisional and continuance applications are commonly used to make amendments associated with the technology incorporated in the first patent. In other words, the applications are used to define and extend the technology incorporated in the original patent’s claims while retaining the filing date of the original.

¹¹⁵ Joint Electron Device Engineering Council Homepage, <http://www.jedec.org>. [hereinafter *JEDEC Homepage*]

¹¹⁶ *Rambus*, 318 F.3d at 1085.

technologies (SDRAM and its successor DDR-SDRAM)¹¹⁷ that included elements claimed in Rambus's pending patents. Though there is evidence that Rambus divulged some of its issued patents as early as 1993 to the committee, Rambus never officially acknowledged any of its pending applications, many of which incorporated elements of the DRAM technology and its progeny.¹¹⁸ In fact, before the JEDEC adopted the DDR-SDRAM standard in 2000, Rambus had officially withdrawn from the JEDEC and had subsequently filed additional divisional and continuance applications that ultimately incorporated four of the technologies adopted in the DDR-SDRAM standard.¹¹⁹ After these patents began to issue in 1999, Rambus enforced its intellectual property rights against the standards' adopters, including Infineon, a member of the JEDEC and a manufacturer of memory modules including SDRAM and DDR-SDRAM.¹²⁰

2. Adjudication¹²¹

In defense of this infringement, Infineon claimed fraud against Rambus under Virginia law because the company failed to disclose to

¹¹⁷ SDRAM stands for synchronous dynamic random access memory, while DDR-SDRAM stands for double data rate-SDRAM.

¹¹⁸ *Rambus*, 318 F.3d at 1085.

¹¹⁹ *Id.* at 1085-86.

¹²⁰ *Id.* at 1086.

¹²¹ The Federal Trade Commission also took notice of this duplicitous activity by Rambus Inc. and brought charges of exclusionary conduct under the Sherman Act and unlawful monopolization under the FTC Act. In re Rambus, Inc., No. 9302, at *3 (2006), available at <http://www.ftc.gov/os/adjpro/d9302/060802commissionopinion.pdf> (last visited Nov. 10, 2006). The FTC found voluminous evidence that Rambus understood how continued membership in the JEDEC would conflict with Rambus's own patent activities, and in fact expected this relationship to benefit the company's patent portfolio. See *id.* at *36-53. One particularly cogent example of this disregard for the ramifications of the company's actions came from an e-mail sent to Rambus executives from its representative on the JEDEC council, stating it was "unacceptable 'to not speak up when we know that there is a patent issue, to intentionally propose something as a standard and quietly have a patent in our back pocket we are keeping secret that is required to implement the standard and then stick it to them later (as WANG and SEEQ did).'" *Id.* at *44 (internal citation omitted). The FTC ultimately concluded that Rambus was guilty of "exclusionary conduct that significantly contributed to its acquisition of monopoly power in four related markets," and remanded the matter of remedies stemming from the company's prior enforcement of patent infringement against other companies to be decided in light of this ruling. *Id.* at *118.

the JEDEC the issued and pending patents related to the JEDEC's proposed standards.¹²² The district court granted judgment as a matter of law for non-infringement to Infineon and tried the fraud counterclaim before a jury, which found Rambus perpetrated fraud on both the SDRAM and DDR-SDRAM standards.¹²³ The district court denied Rambus's motion for judgment as a matter of law on the SDRAM fraud conviction,¹²⁴ and upheld the same motion relating the DDR-SDRAM fraud conviction.¹²⁵ Both sides appealed.¹²⁶

The Court of Appeals for the Federal Circuit reversed the SDRAM conviction and upheld judgment as a matter of law regarding DDR-SDRAM ostensibly on the same grounds. The Federal Circuit found the JEDEC's patent policy only required disclosure of patents and patent applications that a user would need to license in order to use the standard, not those that merely described the technologies under discussion by the JEDEC.¹²⁷ Thus, even though Rambus admitted to a subjective belief that the patent applications covered the SDRAM standard, the majority believed that this did not violate the JEDEC's rather nebulous policy standards.¹²⁸ The majority also remanded the decision of Infineon's non-infringement to the district court for further adjudication, where it is currently being

¹²² *Rambus*, 318 F.3d at 1086.

¹²³ *Id.* at 1086.

¹²⁴ *Rambus, Inc. v. Infineon Techs. AG*, 164 F. Supp. 2d 743, 755-56 (E.D.Va. 2001). The court felt that the jury could have reasonably believed that Rambus's mentioning of the PCT was insufficient disclosure because the application never referenced Rambus's intention to expand the application to include SDRAM, nor did any of Rambus's issued patents.

¹²⁵ *Id.* at 766-67. The court felt that there was insufficient evidence showing Rambus's involvement in the DDR-SDRAM's adoption because official work on its standardization began after Rambus had left the JEDEC.

¹²⁶ *Rambus*, 318 F.3d at 1086.

¹²⁷ *Id.* at 1100-01. *See also* Alban, *supra* note 109, at 324-25 (discussing the SDRAM and DDR-SDRAM patents and the duties of disclosure owed by Rambus).

¹²⁸ *Rambus*, 318 F.3d at 1104 ("Rambus thought it could cover the SDRAM standard and tried to do so while a member of an open standards-setting committee. While such actions impeach Rambus's business ethics, the record does not contain substantial evidence that Rambus breached its duty under the EIA/JEDEC policy"). Perhaps this behavior is not that surprising, for while "standards are taken for granted by end-users, they are deadly serious tools to the companies who stake their commercial success or failure on backing the right technical horse." Andy Updegrave, *Why you should care whether the Supreme Court intervenes in standards case*, MASS HIGH TECH: THE JOURNAL OF NEW ENGLAND TECHNOLOGY, Aug. 22, 2003, http://www.masshightech.com/displayarticledetail.asp?art_id=63372 (last visited Dec. 12, 2006).

adjudicated.¹²⁹

3. The Patent Policy

In ruling against Infineon, the Federal Circuit relied solely upon Appendix E of the JEDEC's Manual of Organization and Procedure, which characterized the organization's patent policy as requiring disclosure of patents and patent applications only after the initiation of the formal standard-setting process, as opposed to discussion or suggestion periods.¹³⁰ The vague language in the JEDEC's Manual was one of the key factors in the Circuit Court's decision, which noted that "there is a staggering lack of defining details in the EIA/JEDEC patent policy."¹³¹ The Circuit Court further stated that "[a] policy that does not define clearly what, when, how, and to whom the members must disclose does not provide a firm basis for the disclosure duty necessary for a fraud verdict."¹³² The Federal Circuit's strict interpretation of JEDEC policy raises the possibility that other technology fields can and will be plagued by unscrupulous members,¹³³ as many SSOs in the early 1990s had similarly "skeletal and vague" intellectual property policies.¹³⁴ Though *Rambus* forced both emerging and established SSOs to revisit their patent policies and to adopt revised policies with expansive coverage for disclosure of patented technologies and pending applications,¹³⁵ the decision does

¹²⁹ *Rambus*, 318 F.3d at 1106-07.

¹³⁰ *Id.* at 1100. The relevant language from Appendix E reads: "Standards that call for the use of a patented item or process may not be considered by a JEDEC committee unless all of the relevant technical information covered by the patent or pending patent is known to the Committee, subcommittee, or working group."

¹³¹ *Id.* at 1102.

¹³² *Id.* See also *Updegrove Hard Cases*, *supra* note 109.

¹³³ See *Updegrove Hard Cases*, *supra* note 109.

¹³⁴ Interestingly, the legal and business fields have often adopted liberal interpretations of contracts such as those signed by members of a consortium, as "[c]ourts will (and regularly do) imply contracts from sufficient factual circumstances." Lemley, *supra* note 8, at 1911 n.71 (2002) (citing E. Allen Farnsworth, *Contracts* 3.10 (2d ed. 1990) (explaining that a contract may be formed "by spoken or written words or by other conduct;" those in the latter category are sometimes called "implied-in-fact" contracts)). This includes standard practices in the industry, though this case proves that relying on judicial interpretation of factual circumstances or customs is rarely predictable. *Id.* at 1911 n.72.

¹³⁵ "[M]any newly formed organizations have adopted state-of-the-art policies whose terms are informed by the lessons learned from prior legal decisions and the strenuous and public debates," while "[s]ome existing organizations have already stiffened their backs and slogged their way through updating and upgrading policies

not appear to be the last instance of obtrusive patents being embedded in widely-adopted computer standards.

IV. A MODEST PROPOSAL – PROPOSED ADMINISTRATIVE APPROACH TO SOFTWARE PATENTS: GRASSROOTS EXPERTS, WASHINGTON OVERSIGHT, AND THE OPEN STANDARDS CONUNDRUM

There is a palpable need for government oversight of the interplay between proprietary technologies incorporated into software protocols and their ascension to industry standards. At the same time, it is equally obvious that those “in the trenches” (e.g., boutique industry organizations and programmers in the industry) can keep pace with the rapid innovation in the industry far better than can a lumbering bureaucratic agency. The flexibility afforded by an informed membership can resolve disputes among software constituents more efficiently than the current system. Furthermore, the intellectually-open and global mindset of these members will assist in maintaining good relations with, and enforcement of these standards in, foreign countries. Thus, this paper proposes the creation of an SSO comprised of a diverse set of industry members that will possess de facto agency authority to define national standards for software and provide regulation and enforcement when applicable. Of note, conformity with the SSO’s mandates will remain voluntary, in line with current industry practice,¹³⁶ but incentives will be in place to

that were formulated, borrowed, or casually put in place many years ago when a spirit of cooperation and dialogue” was the norm. Andrew Updegrove, *What Does Rambus Mean to You?*, <http://www.consortiuminfo.org/bulletins/feb03.php#editorial> (last visited Dec. 12, 2006). [hereinafter *Updegrove Rambus Meaning*] Not surprisingly, the JEDEC has dramatically revamped its patent policy, requiring a “written assurance from the organization holding rights to such patents that a license will be made available to applicants desiring to implement the standard either without compensation or under reasonable terms and conditions that are demonstrably free of any unfair discrimination.” JEDEC Manual of Organization and Procedure, § 8.2 (JM21-L 2001) (2002), <http://www.jedec.org/Home/manuals/JM21L.pdf> (last visited Dec. 12, 2006). [hereinafter *JEDEC Manual*] In addition, all committee members must adhere to the “requirements contained in JEDEC Legal Guides and the obligation of all participants to inform the meeting of any knowledge they may have of any patents, or pending patents, that might be involved in the work they are undertaking.” *Id.* § 8.3.

¹³⁶ The purpose of standards, as opposed to rules, is to define a preferred manifestation or implementation in a field while still allowing adequate leeway for compliance based on the situation at hand. It is a safe assumption that any attempt to grant standards the weight of rules or laws would be met with immediate and

encourage acceptance. Furthermore, enforcement of these standards on members will increase in strength, most notably because of the legal repercussions for failure to adhere to the SSO's patent policy.

A. *Who Represents the Industry?*

Currently, membership in software SSOs is voluntary and non-discriminatory, with the only significant distinctions being yearly dues and patent policies. At one extreme are organizations like the IETF, a volunteer organization without dues or set membership whose altruistic goal "is to make the Internet work better"¹³⁷ by promoting equal participation in standard creation by any interested party.¹³⁸ Because the IETF was created prior to software patenting and membership has generally been coy about such matters, the IETF "takes no position regarding the validity or scope of any Intellectual Property Rights or other rights"¹³⁹ found in a standard, instead leaving the matter to the legislature.¹⁴⁰ At the other end of the spectrum, organizations such as W3C impose strict obligations on its members, requiring all to sign contracts allowing for royalty-free or RAND licensing of patents and to pay appropriate dues (which can be as much as \$65,000 a year).¹⁴¹ Though the organization welcomes all potential members, these stringent requirements certainly limit membership to a somewhat elite group of companies and those heavily invested in the Internet. At the same time, the contract makes enforcement of W3C's policies far easier and more robust, resulting in fewer instances of "hidden" patents in standards and a more defined

indignant resistance.

¹³⁷ Harald Alvestrand, *A Mission Statement for the IETF*, Oct. 2004, <http://www.ietf.org/rfc/rfc3935.txt> (last visited Dec. 12, 2006).

¹³⁸ See Perens, *supra* note 78.

¹³⁹ Alvestrand, *supra* note 137, at 6.

¹⁴⁰ See Perens, *supra* note 78.

¹⁴¹ Perens, *supra* note 78; see also W3C, *How to Become a W3C Member*, <http://www.w3.org/Consortium/join> (last visited Dec. 12, 2006); W3C, *Patent Policy Framework*, Aug. 16, 2001, <http://www.w3.org/TR/2001/WD-patent-policy-20010816/> (last visited Dec. 12, 2006). Note that the recent adoption of a RAND licensing policy by the W3C was met with staunch opposition by developers of web-based software, who claimed that the policy "[had] the potential to block the development of interoperable Web standards." Carol Sliwa, *W3C readies new tech patent policy*, May 19, 2003, <http://www.computerworld.com/development/webdev/story/0,10801,81309,00.html> (last visited Dec. 12, 2006).

methodology if one slips through the cracks.¹⁴²

It is this dichotomy in membership among agencies that must change in order for software standardization to evolve. As they are currently configured, SSOs tend to be dominated by a small fraction of prominent companies (e.g., Sun Microsystems, IBM, etc.) whose intentions stem as much from the pocketbook as from the interoperability and access professed for the organizations. By comparison, the vast majority of users and developers in the industry share a comparatively hushed voice, quieted by expensive membership dues, limited resources for consolidation, and a pervasive sense that standardization should be left to those with a pecuniary stake in the matter.¹⁴³ In a way this makes sense, as these companies create and possess much of the technology embodied in these standards, and thus share more “prominent” incentives in influencing the standardization process than “disinterested” programmers and developers who merely implement them.

Yet, this characterization overlooks the fact that because these users interact with the standards on a daily basis, they stand to gain the most from well-defined and patent-friendly standards, and suffer when the system devolves into a battle among 800-pound gorillas.¹⁴⁴ Furthermore, with the proliferation of software-centric websites, blogs, and message boards, and society’s ever-improving technological literacy, the gap between the “informed gentry” (i.e. software companies, organizations, and experts) and the “proletariat” (i.e. users and developers) is rapidly narrowing. Because most SSOs’ unintentionally limit membership to companies capable of fulfilling the financial and time requirements, the SSOs lose the invaluable knowledge of those “working in the trenches” and the impartiality they tend to display. In effect, these organizations are making the tools without asking the carpenters and mechanics if the tools are the best choices. Thus, any proposed standards agency must allow these ignored parties to be heard, or at least be fairly represented, both

¹⁴² See Perens, *supra* note 78.

¹⁴³ For example, the W3C membership list is a veritable “who’s-who” of the software industry, including IBM, Microsoft, Google, Disney, and OASIS. W3C, Members, Oct. 22, 2006, <http://www.w3.org/Consortium/Member/List> (last visited Dec. 12, 2006). Conspicuously absent from this roll, though, are software user organizations or even individual parties.

¹⁴⁴ While many of these companies certainly entertain goals of advancing technology in a particular field, the fact remains that this ideal is tinged by the belief that “their” marketable technology meets this need best, a dogma that can be more anecdotal than objective.

during the formulation of a standard as well as the current practice of allowing scrutiny prior to ratification.¹⁴⁵

1. Composition of the Agency

This proposed agency (henceforth referred to as FSSO, meaning Federal SSO) would be a hybrid of the NIST and the more industry-centric organizations such as W3C and ANSI. The FSSO's focus would be on providing the full spectrum of opinions and suggestions concerning a standard, not merely the interests of competitors. Since the organization would be a federal agency and voluntary,¹⁴⁶ barriers such as membership dues would be nonexistent and officials chosen by the executive branch would fill administrative positions.¹⁴⁷ These officials, who could not be employed by a lesser SSO or corporation involved in hardware or software, would be subject to the ethics disclosures and restrictions on conduct required of federal government employees.

In addition to these elected officials, the FSSO would feature a diverse work group of representatives from smaller SSOs in the industry and a collection of user societies comprised of individuals and companies not associated with an existing SSO. This latter group would most likely consist of professors, state and federal employees and officials, and other experts in a variety of software fields,¹⁴⁸ all with limited or no apparent pecuniary interest in a particular standard. As with current SSOs, this membership assemblage would propose the bulk of the standards and would work with the selected officials to effectuate their adoption. In addition, all members would be required

¹⁴⁵ For example, ANSI standards are publicly reviewed only when adoption is being sought, not during the formulation process. *See generally ANSI Introduction, supra* note 66.

¹⁴⁶ At first, this uncompelled membership might seem counteractive to the goals of a regulatory organization, since companies in the industry that did not agree with, or simply did not want to be governed by, the organization could refrain from joining and continue to sell their wares without restriction. While this concern is addressed later in the note, a key element of the FSSO would be the balance it struck between promoting new, affordable technologies for developers while protecting the intellectual property rights and marketability of the technologies' owners.

¹⁴⁷ By electing board members, the hope would be to insulate them somewhat from coercion or influence by industry politicking and interest groups. However, the idea is contingent upon officials culled from the ranks of the lower SSOs or universities.

¹⁴⁸ For example, this latter group would include individuals with expertise in encryption, databases, Internet, and file formats.

to join industry or technology-specific task forces within the FSSO; these groups would have the responsibility to design and submit proposals for new standards in that field for general adoption.¹⁴⁹ Each committee's chair would be a member of that committee elected by his or her peers, with certain administrative duties entailed in the position.¹⁵⁰ A member could join multiple task forces depending on his or her interests, but a majority vote could remove him¹⁵¹ as a means to protect against companies increasing the odds of technology adoption by joining as many groups as possible.¹⁵²

Such partnerships are not uncommon in federal organizations, particularly those in which public policy and societal concerns are intertwined heavily within the traditional oversight duties of the government. For example, the Environmental Protection Agency ("EPA") has a long history of "reach[ing] out to business, industry, trade associations, communities, universities, and state and local governments to solve environmental problems not generally addressed by laws and regulations," where regional expertise can bring about more efficient and timely remedies than by the EPA working alone.¹⁵³ In addition, many of the issues facing the EPA are urgently time-

¹⁴⁹ This practice is quite common with a number of SSOs such as W3C and JEDEC, as it allows those parties that are the most knowledgeable and, more importantly, most affected by the standards to play a key role in the adoption process.

¹⁵⁰ For example, the chairs would oversee meetings, have the minutes taken, produce reports about committee decisions, break stalemates in voting, and serve as the representative of the committee to the greater FSSO membership.

¹⁵¹ A simply majority (greater than 50%) or two-thirds (greater than 66%) would be the most logical, but alternatives are certainly possible. This power could also be used to remove members who fail to provide viable proposals over time, such as proposals with murky patent bases, compatibility issues, etc.

¹⁵² In other words, a large company like Adobe would not be able to join a task force dealing with OS's because Adobe lacks demonstrable expertise and investment in that industry. Otherwise, Adobe could, at least in appearance, use its position to influence the group in favor of a business partner, not a superior technology.

¹⁵³ Environmental Protection Agency, Partnerships, <http://www.epa.gov/epahome/partnerships.htm> (last visited Dec. 12, 2006). For another example of federal-private cooperation, *see generally* Bureau of Industry and Security Technical Advisory Committees, <http://tac.bis.doc.gov/> (last visited Dec. 12, 2006) "The [Technical Advisory Committees] are composed of representatives from industry and Government representing diverse points of view on the concerns of the exporting community. Industry representatives are selected from firms producing a broad range of goods, technologies, and software... [and] balanced to the extent possible among large and small firms." *Id.* The Technical Advisory Committees' chief duty is to formulate the best licensing and export practices for America.

sensitive, making it virtually impossible for the organization to mobilize and accumulate the necessary information to address a newly discovered toxic waste spill or contaminated aquifer, for example, without assistance from more knowledgeable third parties.¹⁵⁴

For an example of this movement in the software industry, consider that the Patent and Trademark Office recently joined with the Peer to Patent Project, a brainchild of Professor Beth Noveck, to allow experts in computer software and hardware to provide prior art references against pending applications.¹⁵⁵ Under this system, once a pending patent application is published, people worldwide will be able to submit prior art references to a publicly-viewable website on which others will be able to view, edit, and identify the most relevant references for the examiner to consider.¹⁵⁶ As prior art is submitted, other users will rate the prior art, its submitter, and review the prior art's relevancy to the given claim.¹⁵⁷ After the requisite timeframe, the patent examiner will supplement her own research with the top prior art references as well as any comments attached to them by the community.¹⁵⁸

The same concerns about local expertise and rapid response faced by the EPA would also exist for the FSSO, as it would deal with a broad spectrum of technologies evolving from the machinations of

¹⁵⁴ For example, the EPA's "Superfund" was designed to finance rapid clean-up efforts for "uncontrolled hazardous waste sites," many of which pose immediate danger to people and the environment. Environmental Protection Agency, What is a "Superfund Site?", <http://www.epa.gov/superfund/programs/recycle/rtu/faqs.htm#2> (last visited Dec. 12, 2006). When one of these sites is located, the "EPA works closely with communities, potentially responsible parties (PRPs), scientists, researchers, contractors, and state, local, tribal, and other federal authorities. Together with these groups, EPA identifies hazardous waste sites, tests the conditions of the sites, formulates cleanup plans, and cleans up the sites." *Id.* In situations like this where speed is of the essence, partnerships with informed parties prove indispensable.

¹⁵⁵ USPTO Strategic Plan 2007-2012, available at http://www.uspto.gov/web/offices/com/strat2007/stratplan2007-2012_06.htm (last visited December 7, 2006); "United States Patent and Trademark Office to Implement Patent Reform Project Developed by New York Law School's Institute for Information Law & Policy", available at http://dotank.nyls.edu/communitypatent/pressrelease_082906.html (last visited Dec. 7, 2006).

¹⁵⁶ Beth Noveck, "Peer to Patent": *Collective Intelligence, Open Review and Patent Reform* 51-52, 53-55, available at http://dotank.nyls.edu/communitypatent/docs/openreview_sep_02.pdf, (last visited Dec. 6, 2006).

¹⁵⁷ Noveck, *supra* note 156, at 55-56.

¹⁵⁸ Noveck, *supra* note 156, at 56.

one or a few inventors, which no doubt would be shrouded in secrecy and confidentiality agreements until their public release. Without involving experts in that field, the FSSO would be trapped in a reactionary rather than proactive posture, lagging behind the curve and wasting valuable resources and time to play catch-up. This should not and does not represent wholesale reliance on outside personnel by the FSSO, as such release would likely devolve into the same agenda-driven conflicts afflicting SSOs mentioned earlier. Instead, by making use of already existing knowledge, the organization would be able to ride the wave of emerging technology and adopt it as soon as possible. This is especially important in the ever-evolving software industry, where delays caused by detailed FSSO research could lead to standards becoming obsolete before they gained acceptance.¹⁵⁹

2. Consent of the Governed¹⁶⁰

Of course, all of this camaraderie would be for naught if the non-governmental organizations and individuals involved in the FSSO felt that their knowledge and input fell on deaf ears.¹⁶¹ As mentioned earlier, that is a key problem with both public and private SSOs, where adopted standards are sometimes perceived to be spurred as much by fiscal as by technological reasons.¹⁶² If the FSSO did not address the current problem, there would be little reason for parties to join the agency; the FSSO would be virtually indistinguishable from those already in existence save for its federal affiliation. Rather, this FSSO would garner membership by: (1) allowing the *true* masses to propose

¹⁵⁹ For a discussion of this rapid technological progress, *see supra* note 22.

¹⁶⁰ Originally found in the Declaration of Independence, this notion of authority and enforcement granted to a governing agency by the governed is one of the hallmarks of democratic society. *See* JOHN LOCKE, *SECOND TREATISE OF GOVERNMENT* (C.B. Macpherson ed., Hackett 1980).

¹⁶¹ Peter K. Yu, *Intellectual Property and the Information Ecosystem*, 2005 MICH. ST. L. REV. 1, 12 (2005) (“Too often the interests of the ‘producer’ dominate in the evolution of IP policy, and that of the ultimate consumer is neither heard nor heeded. So policy tends to be determined more by the interests of the commercial users of the system, than by an impartial conception of the greater public good.” (*quoting* COMM’N ON INTELLECTUAL PROP. RIGHTS, *INTEGRATING INTELLECTUAL PROPERTY RIGHTS AND DEVELOPMENT POLICY: REPORT OF THE COMMISSION ON INTELLECTUAL PROPERTY RIGHTS*, 7 (2002), *available at* http://www.iprcommission.org/papers/pdfs/final_report/CIPRfullfinal.pdf) (last visited Nov. 14, 2006).

¹⁶² McKenzie, *supra* note 9, at 154 (A common complaint with SSOs being that they allow “one private consortium, which is made up of a subsection of the entire industry, [to] create the standards for the entire industry.”).

standards, (2) recognizing equal voting power among FSSO members, (3) providing adequate protection against monopolization, fraud, and misrepresentation and, most importantly, (4) striking a common ground between promoting fair licensing of new technologies to users and protecting the intellectual property rights of the technologies' owners and the market potential of these rights. While these measures certainly would not insulate the FSSO completely from the abuse and inefficiency that exists with all SSOs, the measures would make the organization far more cognizant of these issues and proactive in remedying them.

a. Proposing a Standard

The first step in standardization for any SSO is soliciting and reviewing proposed standards, which tends to be time when the more powerful and influential members exert influence. Perhaps the most notorious example of this is Microsoft's dominance of the world's desktops, a supremacy that ultimately led to antitrust violations being levied against the Seattle-based giant.¹⁶³ For example, a 2002 report noted that Microsoft Operating Systems (OS) accounted for 93.8 percent of all client-side desktops,¹⁶⁴ and a 2005 survey showed that even with a number of competing browsers (Firefox, Opera, and Mozilla, among others), Internet Explorer still accounted for 85.5 percent of the worldwide market.¹⁶⁵ This preeminence, not surprisingly, allows Microsoft to exert substantial influence on software developers, as they must weigh the interoperability associated with writing code for the Microsoft platform against any concerns they may have about its quality and limitations.¹⁶⁶ This same

¹⁶³ United States v. Microsoft Corp., 253 F.3d 34, 46 (D.C. Cir. 2001).

¹⁶⁴ Laura Rohde, *Windows Dominates on the Desktop*, Oct. 8, 2003, <http://www.pcworld.com/news/article/0,aid,112840,00.asp> (last visited Dec. 12, 2006).

¹⁶⁵ Ingrid Marson, *Firefox achieves 10 percent market share*, Dec. 12, 2006, <http://news.zdnet.co.uk/software/applications/0,39020384,39235378,00.htm> (last visited Dec. 12, 2006).

¹⁶⁶ Though Microsoft has since made efforts to comply with public standards, its browsers have historically not been compliant with many standards, including W3C. See Will Rodger, *Intel exec: MS wanted to 'extend, embrace and extinguish' Competition*, Nov. 8, 1998, http://news.zdnet.com/2100-9595_22-512681.html (last visited Mar. 10, 2006) (In 1998, charging that Microsoft "hope[d] to 'embrace, extend and extinguish' competition by substituting the company's proprietary software for the public-domain, open technologies" in many of their products.); Paul Festa, *Developers gripe about IE standards inaction*,

“800-pound gorilla” scenario plays out in virtually all other facets of the software industry, with most designers choosing interoperability and licensing in light of a stiff battle for acceptance of their products. SSOs must also deal with this issue, where interoperability between adopted standards is essential not only for technical reasons, but also for public perception.¹⁶⁷ Unfortunately, too often interoperability stems from de facto standards that arise from quality marketing as much as from superior technology, continuing the cycle of dominance that precipitated the standards. While the notion of a common symmetry of standards-sharing is a key goal of the new FSSO, the FSSO must derive these touchstones from the widest array of technologies possible. The FSSO can only accomplish this objective if every member of the organization is able to make credible proposals irrespective of the member’s market size or lineage. Luckily, most SSOs actively encourage their members to promote new technologies for review, so this will not come as a major shock to the culture of these entities.¹⁶⁸ What will be startling will be the acknowledgement of proposals from all members, not merely those with the deepest pockets.

Of course, one of the key concerns with this open call would be a deluge of proposals, led by the most powerful and prominent members of the consortium. At worst, task force meetings would

1032-5088642.html (last modified Oct. 9, 2003) (From 2003, in response to Internet Explorer’s inability to comply with Cascading-Style Sheet (CSS) standards, developers note that “[b]ecause it owns the marketplace, Microsoft’s under very little pressure to fix remaining IE 6 bugs[.]”); Paul Festa, *W3C members: Do as we say, not as we do*, http://news.com.com/W3C+members+Do+as+we+say%2C+not+as+we+do/2100-1023_3-956778.html (last modified Sept. 6, 2002) (noting that as of 2002, only 4.6% of W3C’s member’s products and sites complied with the web standards they adopted); *but see* Chris Wilson, *IEBlog: Standards and CSS in IE*, <http://blogs.msdn.com/ie/archive/2005/07/29/445242.aspx> (last visited Dec. 12, 2006) (A blog from a lead IE developer at Microsoft trumpeting the new version of Internet Explorer and its compliance with numerous standards.).

¹⁶⁷ For example, if an SSO like NIST’s ITL did not maintain some consistency in selecting encryption standards for Internet transmissions, not only would members be wary about adopting a technology that could prove incompatible with the next standard, but the general user public would undoubtedly perceive the SSO as an inconsistent organization with little direction and unreliable standards practices. Even if each proposed standard encompassed technology that truly was “better” than the last incarnation, the skepticism and inconsistency that swirled around the technology would probably scare away most adopters.

¹⁶⁸ *See* W3C, Member Submission Process, <http://www.w3.org/2005/10/Process-20051014/submission.html#Submission> (last visited Dec. 12, 2006).

devolve into a glorified beauty contest, with each company shilling its products in lieu of focusing on the best technology available. While such a scenario could play out (and arguably does with many SSOs), the FSSO would have a number of safeguards in place in order to combat such an occurrence, most notably the ability to remove biased or unproductive members. With the recourse to removal and the inherent inability to influence standards affecting their own industry, companies would be far more cautious about their proposals. Another safeguard would be that, in lieu of the immense R&D, testing, and marketing costs for a technology, many members would either be unable or unwilling to invest in proposed standards, instead waiting for one to be adopted and then creating derivatives and enhancements for the market.¹⁶⁹ Thus, while only a handful of companies produce full operating systems (notably Microsoft, Apple, and Red Hat Linux) there are thousands of businesses responsible for the cornucopia of tools and software that run on their operating systems.¹⁷⁰ Finally, the sanctity of the proposal process would be buttressed by the universal voting powers enjoyed by all members.

b. Universal Voting

The right to popular vote is a bedrock of American society and, not surprisingly, is common among SSOs. As one would expect from the sheer number of SSOs and their varying practices, little uniformity exists pertaining to voting qualifications, voting procedures, and level of agreement (varying among uniformity, two-thirds majority, and

¹⁶⁹ While on paper this might sound simple, note that the terms for licensing these base technologies are some of the most scrutinized elements of an SSO's by-laws. "SSO IP rules have important implications for IP policy, particularly patent policy... it should be clear that we cannot design an optimal patent policy without paying close attention to how patents are actually used and licensed in practice. SSOs are a large piece of that puzzle." Lemley, *supra* note 8, at 1971. See also U.S. Dep't of Justice and Fed. Trade Comm'n, Antitrust Guidelines for the Licensing of Intellectual Property (1995), <http://www.usdoj.gov/atr/public/guidelines/0558.pdf> (highlights many of the issues SSOs must grapple with when defining their licensing policy) [hereinafter *IP Guidelines*].

¹⁷⁰ One of the key concerns of any company promoting or adopting a standard is that "[t]he competitors who have spent their time and money adopting the 'obsolete' standards will lose their sunk costs and will have to pay to license the new standard." McKenzie, *supra* note 9, at 155. The FSSO would combat this scenario by refraining from adopting any standard for a particularly competitive technology, allowing the market to adopt a de facto standard.

simple majority).¹⁷¹ In general, most SSOs push their subcommittees and task forces to adopt proposals with uniformity or a substantial majority with few abstentions.¹⁷² The minimization of dissent flows from the mantra of SSOs, which is to adopt the best technologies in the industry while remaining above the disputes that arise from pecuniary interests and competition.¹⁷³ Unfortunately, while compromise and uniformity may work with petulant children, there is simply too much at stake financially to expect many members of an SSO to reach such accords consistently. Instead, as the IEEE recently found out, “in some cases some standards lend themselves to corporate entity voting rather than individual voting.”¹⁷⁴

This commercialized voting is an inherent problem with any SSO that derives most, if not all of its membership from companies involved in the industry, especially when combined with yearly dues that place an even greater financial stake in the organization’s decisions. In contrast, the FSSO will feature a substantial portion of its membership drawn from users and experts who do not have any direct corporate allegiances, as these members will be more capable of detaching themselves from the product’s source and focusing simply on the best technology. Furthermore, these members will be granted the same voting rights as the corporate members, with the same “one

¹⁷¹ See W3C, General Policies for W3C Groups, § 3.4 Votes, <http://www.w3.org/2003/06/Process-20030618/policies.html#Votes> (last visited Dec. 12, 2006) (outlining the process and requirements for voting in groups, which should occur only if discussion and compromise fail to reach a consensus) [hereinafter *W3C Votes*]; Institute of Electrical and Electronics Engineers, Inc., IEEE Standards Association Operations Manual, § 6.3 Membership Privileges at 21 (2006), <http://standards.ieee.org/sa/sa-om.pdf> (last visited Oct. 22, 2006) (discussing various benefits and requirements of membership, including the ability to vote “on an unlimited number of proposed IEEE draft standards, and on the reaffirmation or withdrawal of existing IEEE standards”); *JEDEC Manual*, *supra* note 135, § 5 Voting (outlining when two-thirds and three-fourths majorities are necessary and affirms the “[o]ne company, one vote” wherein all formal, binding votes will be restricted to one vote per company.”)

¹⁷² See *W3C Votes*, *supra* note 171, at § 3.3 Consensus; *IEEE Manual*, *supra* note 166, § 5.4.3.1 (“For a standards ballot to be effective, at least 75% of the ballots shall be returned. In the event that the 75% return from the balloting group cannot be obtained, the balloting process is considered to have failed.”).

¹⁷³ A good analogy would be non-profit institutions, whose focus is less on the bottom line than on providing endowments and support for certain causes.

¹⁷⁴ Mark Hachman, *Could IEEE Voting Changes Break Tech Stalemates?*, EXTREMETECH, Nov 9, 2004, <http://www.extremetech.com/article2/0,1697,1730403,00.asp> (last visited Dec. 12, 2006) (quoting Eric Broockman, chief executive of Alereon and member of the Multiband OFDM Alliance).

company, one vote” limitation found in the JEDEC’s policy.¹⁷⁵ While unity and compromise will always be sought, the official method for adopting a proposal will be through a formalized vote initially requiring a two-third majority of the committee’s membership for ratification.¹⁷⁶ If a proposal fails to garner the necessary votes, committee members will provide suggestions to improve the proposal, and then the members will vote on the revised proposal. Since one of the goals of the FSSO is efficient adoption of standards, this process will continue only for a reasonable period of time,¹⁷⁷ at which point the required votes will drop to a simple majority.

Once the committee adopts a proposal, it will be presented to the general FSSO membership for ratification. The same voting scenario would apply here as in the committee, with ratification initially requiring a two-thirds vote, revisions being made to the proposal where possible, and a simple majority ultimately being required if the FSSO leadership faced a stalemate. Finally, since the FSSO adopts the standards, the standards would be published and made public for review. Parties would then have anywhere from 30 to 60 days to file grievances addressing perceived deficiencies with the standard, which could delay finalization of the standard depending on the severity of the complaint or fault.

*c. Protection Against Fraud, Misrepresentation, and
Hidden Patents*

In addition to promoting “fair” standards that experience little

¹⁷⁵ In other words, if a user or expert is involved with multiple SSOs, user groups, and/or non-profit institutions, she will still be limited to a single vote. Just as with corporations, though, determining the degree of involvement and influence this user exerts over other members would be determined on a case-by-case basis within the FSSO.

¹⁷⁶ Many SSOs require that a quorum be established prior to any voting, and specify in their by-laws what constitutes a quorum. See *JEDEC Manual*, *supra* note 135, § 3.5 Quorum; *W3C Votes*, *supra* note 171 (specifies that a “group charter should include formal voting procedures (e.g., quorum or threshold requirements) for making decisions about substantive issues.”) (emphasis in original). Because of the uncertainty in group size and composition, the FSSO would leave the quorum determination to the committee, which would specify it within its by-laws, similar to the W3C.

¹⁷⁷ This is a subjective standard that will be determined by the head of the committee, based on factors such as the number of revisions, the timeliness of the standard, and the feasibility and utility of these improvements in relation to the standard’s purpose. In general, though, 30 to 60 days would be adequate.

outward commercial influence, this proposed voting system would also help protect both FSSO members and general users from the fraud and “submarine” patents¹⁷⁸ that give pause to all SSOs, exemplified in the aforementioned GIF and *Rambus* situations. While *Rambus* highlighted many of the flaws that existed in SSOs’ patent policies and led to widespread hand-wringing, the case also cast a refulgent light on this long-overlooked element of the standard-setting process.¹⁷⁹ Instead of using boilerplate language for patent disclosure and optimistically expecting all members to comply, SSOs began to explicitly impose an “obligation of all participants to inform the meeting of any knowledge they may have of any patents, or pending patents, that might be involved in the work they are undertaking.”¹⁸⁰ SSOs have since become quite proactive in identifying and addressing this issue of disclosure of both patented and pending technologies, though this effort could be further improved.¹⁸¹

In line with private SSOs, the FSSO would have an explicit policy concerning patent disclosures, both issued and pending, but would improve on the existing policies with unambiguous language defining what a member must divulge to a committee and its members. Instead of nebulous terms such as “related to” or “involved with,” the FSSO would use definitive language requiring a member to disclose “any patents or pending patents *currently* incorporated, or which *may*

¹⁷⁸ Submarine patents concern a patented technology that is unknowingly incorporated into a product or standard, either because no patent had been issued at the time of the technology’s adoption or the patent owner refrained from informing users of his claim, and then not found until the product has matured. See Perens, *supra* note 78. This practice is closely related to patent farming, in which a patent holder pushes the inclusion of a patented technology in a product or standard and, once it germinates, demonstrates ownership. *Id.*

¹⁷⁹ See *Updegrove Hard Cases*, *supra* note 109.

¹⁸⁰ *JEDEC Manual*, *supra* note 135, §8.3. See also *Updegrove Hard Cases*, *supra* note 109 (discussing how this case spurred many SSOs to reevaluate their patent policies).

¹⁸¹ See *Updegrove Rambus Meaning*, *supra* note 135 (noting that the disclosure “specification...continues to be disturbingly common in the policies of many standard setting organizations today, some of which use words such as ‘related to’, ‘involved in’ and other formulations to a similar effect without establishing clearly what those words are intended to mean”). The W3C is an exception, though, as it has a very detailed process for adopting a standard, including a review by the Patent Assessment Group (PAG) for submarine patents and a strict policy of royalty-free licensing of any patented elements of an adopted standard. Perens, *supra* note 78. In fact, “W3C’s policy is to withdraw a standard if a submarine patent affecting the standard is revealed and the patent holder is not amenable to royalty-free licensing.” *Id.*

be incorporated in the future, in a proposed standard.” This would not require the member to disclose proprietary or previously-unknown technologies that could injure the future value of the technology to the member. Instead, the FSSO would require members to discuss only enough of the technology as described in the proposal *and* enough to put other members on notice of its inclusion.¹⁸² The policy’s goal would be to provide notice as early as possible in the adoption process, and these disclosures would add to the transparency required under the APA of government agencies like the NIST.

In addition to this stringent disclosure, the FSSO would require that any patented technology incorporated into a standard be made available to users under a RAND license determined by the committee that made the proposal.¹⁸³ That way, the affected member would have a say in determining the value of the technology, the other members would be able to proffer educated suggestions (compared to a static licensing value irrespective of the technology or those suggested by members not familiar with the industry), and some consistency could be maintained since the same members would be voting in each instance. This monitored licensing would also prove useful in enforcing the disclosure requirement, since the FSSO would impose liability irrespective of whether the company disclosed the patented technology prior to the standard’s adoption. That decision, though, would have ramifications during the licensing deliberations, when the committee could punish the offending member by licensing the technology at a reduced rate or for free, depending on the egregiousness of the offense. Beyond this financial safeguard, offending members could be removed from a committee by vote, and since members of the FSSO would be required to sign contracts acknowledging the policies of the FSSO, could be held liable for contract violations as well as additional torts. Finally, because members would be involved in a governmental entity and would be subject to statutory rules, criminal charges could be brought against the members in extreme circumstances, similar to those imposed by the Department of Commerce’s Bureau of Industry and Security.¹⁸⁴

¹⁸² In other words, if member X has a pending patent on a database protocol incorporated in a proposed database standard, the member would be required only to divulge its existence and its role in the standard. The member would not be required to make its internal operations or code publicly available until the patent was issued.

¹⁸³ For a sizable list of SSOs and their licensing policies, *see* Lemley, *supra* note 8, at 1973-75 (Appendix).

¹⁸⁴ *See* Bureau of Indus. and Sec., U.S. Dep’t of Comm., Export Enforcement, Prosecuting Violators,

d. Bringing It All Together: Joining the FSSO

With strict disclosure requirements, robust voting rights, and stiff penalties for non-compliance, what incentive would a company have to join the FSSO compared to any of the less-stringent but equally-relevant private SSOs? Though an answer exists, it depends on the member's size, goals, and willingness to cede some authority to the agency. Furthermore, since membership in the FSSO would be voluntary, a party could simply opt not to join. That said, the FSSO would provide options comparable to those offered by private SSOs, as well as benefits that can only be supplied by a governmental agency.

For smaller companies or even single entities, the FSSO's "one party, one vote" system would provide a sense of protection from oppression and control that does not always exist in other SSOs, where larger companies are able to impose their will simply based on their size and number of subsidiaries. Under the FSSO, Microsoft, for example, would have the same number of votes in adopting spreadsheet standards as Dan Bricklin, the inventor of the spreadsheet.¹⁸⁵ This might be troubling initially, as a single user could cancel out the vote of the biggest player in software. However, the strict requirements imposed on membership, as well as the lessened voting requirements in the event of a stalemate, should help mollify these concerns. Along those same lines, the ability for any member, irrespective of size or pedigree, to propose a standard would likely galvanize users to invent and bring these ideas to market. Instead of being silenced by the larger companies who tend to overlook the technology's benefits in lieu of market considerations, the smaller companies would at least have the opportunity for their product to be considered as a standard. In combination with the voting system, these new technologies would have a chance for adoption, stimulating creativity and progress in the industry while providing some equality in an otherwise market-driven industry.

Another advantage of the FSSO for smaller companies would be the protection the agency provides them from the hidden patents

<http://www.bis.doc.gov/ComplianceAndEnforcement/EnforcementHome.htm> (last visited Dec. 12, 2006) (outlining punishment for violating federal laws associated with exportation of technology, including up to 10 years in prison and \$1 million in fines per offense).

¹⁸⁵ For a brief discussion of Bricklin's accomplishments and current research and development, see Dan Bricklin, Dan Bricklin's Web Site, <http://www.danbricklin.com/> (last visited Dec. 12, 2006).

and licensing issues that arose in connection with GIF and *Rambus*. While large companies tend to pay just the licensing fee and continue to use the standard, these smaller entities may not have the resources to do so. With the FSSO's licensing requirements, the smaller users would have the ability to mold the fees to a manageable amount and, hopefully, still be able to use the technology in the future. Plus, the lowered fees would make it possible for smaller developers to gain access to technologies the developers may not be able to afford otherwise, which would no doubt spur derivative developments.

As for the larger companies, the FSSO offers the possibility of substantial market growth if their standard is adopted, as it would then become the "official" standard adopted by the federal government.¹⁸⁶ Both public and private parties would undoubtedly be amenable to utilizing the standard in their business, especially if the standard is an essential tool such as data encryption. While this might lead to cries of antitrust violations and collusion between government and private entities, the transparency of the FSSO and its freedom not to adopt any standard at all in particularly competitive markets would certainly be relevant. As for the voting system, while it might injure the company when it is seeking adoption of its standard, it can also be a powerful weapon against a competitor, as it gives the company a chance to halt a monopoly before it might materialize. Additionally, from a somewhat Utopian mindset, the adoption of the best technology should probably fall to those who use it every day, the relatively-impartial users and small developers in the FSSO.

Finally, the disclosure requirement could actually benefit these larger companies because it would provide them with the same protection from submarine patents as the users, while at the same time not require overly-broad disclosures of their patent portfolios. Thus, the possibility of an *Eolas*-style¹⁸⁷ scandal rocking a company like Microsoft, which would naturally be a target of those hoping to cash in on a patented technology adopted by a giant, would be greatly diminished. Because these larger companies would be licensing the technology in the same way as all other FSSO members, the price

¹⁸⁶ This would immediately open the door for governmental adoption under the National Technology Transfer and Advancement Act of 1995, which requires the federal government to use non-proprietary technologies adopted by SSOs. See National Technology Transfer and Advancement Act of 1995, Pub. L. No. 104-113, 110 Stat. 775 (1996).

¹⁸⁷ *Eolas Tech., Inc. v. Microsoft Corp.*, 2004 U.S. Dist. LEXIS 534 (N.D. Ill. 2004), *vacated in part*, 399 F.3d 1325 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 568 (2005).

would be less than on an individualized basis, while at the same time costly litigation would be eliminated. As for required disclosures, the larger companies are already likely to be under intense scrutiny due to their prominence, so little if any new knowledge could be culled from the limited information they would divulge.

V. CONCLUSION

As the legendary football coach Bill Parcells once said in response to a perceived inability to draft players he wanted for his team, if “[t]hey want you to cook the dinner, at least they ought to let you shop for some of the groceries.”¹⁸⁸ A similar statement can be made about the current standard-setting process in the computer industry, where prominent corporations exert immense influence on both public and private SSOs to adopt their products as standards, forcing users and, at times, developers, to passively accept the standards or risk non-interoperability. Though this system has proven adequate in most instances, it has done so in spite of some glaring issues that have hampered its efforts to provide true industry input. Thus, while this proposal for a true public SSO with government powers and regulations may at first appear a mere pipe dream, the fact remains that it would remedy a number of the chief failings of the current regime while still providing enough flexibility to address any present or future concerns.

¹⁸⁸ Upton Bell and David Chanoff, *Settling the Score*, BOSTON MAGAZINE, Dec. 2001.

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**THE AMERICAN INVENTOR’S PROTECTION ACT:
A LEGISLATIVE HISTORY**

Edward R. Ergenzinger Jr., Ph.D. †

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“This was one of the great stories in patent law, if you’re interested in politics. There never before has been a patent bill that was really political the way this one was.”¹

I. INTRODUCTION

After four years of scathing debate, the final hours of the 1999 legislative session gave birth to a \$390 billion omnibus spending bill that implemented the biggest changes to patent law since 1952.² The bill was subsequently signed into law as the American Inventor’s Protection Act (“AIPA”) by President Clinton on November 29, 1999, amid a flurry of denunciations and reprisals by the bill’s opponents.³ Chief among the bill’s opponents were many independent inventors and their allies. Maintaining that independent inventors lost a battle but not the war, Steven Michael Shore, president of the Alliance for American Innovation, said, “Now there is a legitimate need for patent reform to correct the abuses that have been just recently written into law.”⁴ In a letter to Senate Majority Leader Trent Lott (R-Miss.), Nobel Laureate Franco Modigliani of the Massachusetts Institute of Technology wrote, “The effort to rush through the Senate this questionable and potentially highly detrimental legislation is inexcusable.”⁵ Conservative writer Phyllis Schlafly ratcheted up the rhetoric with her own assessment that the true backers of the bill were “foreigners, whose motive is to steal U.S. intellectual property [and]

† J.D., Wake Forest University, 2002; B.A. Biology & Psychology, Wake Forest University, 1994; Ph.D. Neuroscience, Wake Forest University, 1999. Ed Ergenzinger is licensed to practice in North Carolina and before the United States Patent and Trademark Office. This article was written while the author was a student at Wake Forest University School of Law, and a version was previously published as 2 WAKE FOREST INTELL. PROP. L. J. 130 (2002). The article represents the views of the author only, and not of Alston & Bird, LLP. It is republished here due to the limited distribution of the original article.

¹ Victoria Slind-Flor, *Long-Fought Patent Changes Arrive*, NATIONAL LAW JOURNAL, Dec. 20, 1999, at B15 (quoting Gregory Maier, Chairman (1999) of the American Bar Association Section of Intellectual Property Law).

² 145 CONG. REC. S14836 (1999) (statement of Rep. Schumer); *See also* Slind-Flor, *supra* note 1 at B15.

³ American Inventors Protection Act of 1999, Public L. No. 106-113, 113 Stat. 1537-44 (1999); Slind-Flor, *supra* note 1 at B15; John Schwartz, *Inventors Say Proposed Patent Law Will Lead to Stealing Ideas*, WASHINGTON POST, Nov. 4, 1999, at A08.

⁴ Kent Hoover, *Independent Inventors Vow To Continue Patent Fight*, BUSINESS JOURNAL-PORTLAND, Dec. 3, 1999, at 11.

⁵ Schwartz, *supra* note 3 at A8.

the multinationals that want to control all innovation and therefore look upon independent inventors as their natural enemies.”⁶

Given the forceful opposition voiced by independent inventors and their allies, it is surprising to note that the origins of the AIPA date back to 1995, when Sen. Joseph Lieberman (D-Conn.) introduced a bill as an effort to prevent unscrupulous invention development firms from exploiting independent inventors.⁷ At the time, allies of the independent inventor lauded the bill. Robert G. Lougher, President of an all-volunteer consumer group for inventors called the Inventors Awareness Group, Inc. (“IAG”), testified before House Subcommittee on Courts and Intellectual Property that:

[The Inventor's Protection Act of 1995] is long overdue. Our Federal Government has routinely and vigorously protected our Nation's precious and limited natural resources, while ignoring our Nation's most precious natural resource ... the independent inventor. Without the independent inventor, we, as a Nation, would not have the know-how to best utilize or benefit from any of our other natural resources.⁸

So what happened? In a nutshell, the patent bill became “one car in a train of legislative add-ons,” a plight which was exacerbated when some conservatives chose to oppose changes to the patent law that they viewed as examples of “creeping internationalism.”⁹ This article will examine the convoluted and arduous process behind the enactment of the AIPA. Part One will discuss how efforts during the 104th Congress to address the problem of invention development companies snowballed into an omnibus patent reform bill that became hopelessly mired down in the House of Representatives. Part Two will analyze how the patent reform legislation was resurrected in the 105th Congress and narrowly passed in the House, only to hit an unexpected roadblock in the Senate. Part Three will pick up with the 106th Congress and explore the compromises, obstacles, and strange bedfellows that would emerge during the final push toward enacting

⁶ Slind-Flor, *supra* note 1 at B15.

⁷ 141 CONG. REC. S8114 (June 9, 1995)(statement of Sen. Lieberman); S. 909, 104th Cong. (1995).

⁸ *Hearings on H.R. 2419 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*, 104th Cong. (1995) (statement of Robert G. Lougher, President of the Inventors Awareness Group, Inc.).

⁹ Slind-Flor, *supra* note 1 at B15.

the AIPA. Part Four will summarize the effects of the AIPA on the major players in the legislative battle and examine how the legislative process has changed in recent years with respect to intellectual property. Although many would not expect patent law to spark such widespread and heated debate, the legislative history of the AIPA stands as an example of the passions and the vagaries of the legislative process.

II. THE 104TH CONGRESS

On June 9, 1995, Sen. Lieberman introduced S. 909, a bill he dubbed the “Inventor Protection Act of 1995”.¹⁰ The companion H.R. 2419 was later introduced in the House by Rep. Carlos J. Moorhead (R-Calif.).¹¹ Both bills were an attempt to quash a growing problem: fraudulent practices by invention development companies that were bilking independent inventors out of millions of dollars.¹² This was viewed not only as a threat to the individual inventors who were victimized, but also to the national economy since questionable practices threatened to prevent scores of valuable inventions from getting to the marketplace.¹³

A. Senator Lieberman and S. 909

During a hearing held in 1994 by Sen. Lieberman when he was Chairman of the Subcommittee on Regulation and Governmental Affairs, the problems presented by the invention marketing industry were described in detail.¹⁴ Many witnesses testified to the fact that dozens of companies broadly claimed to help inventors market their inventions, but instead took millions of dollars for services that they regularly failed to provide.¹⁵ In 1995, the annual number of individuals estimated to contract with such invention marketers was over 25,000, at a total revenue of \$200 million.¹⁶ In his testimony before the House, Robert Lougher of IAG stated, “This should be the decade of the independent inventor ... this has become the decade of the

¹⁰ 141 CONG. REC. S8114, *supra* note 7.

¹¹ 141 CONG. REC. H9670 (Sep. 28, 1995); H.R. 2419, 104th Cong. (1995).

¹² 141 CONG. REC. S8114, *supra* note 7.

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ Statement of Robert G. Lougher, *supra* note 8.

'Invention Pimp.'"¹⁷

Generally, such fraud begins with companies attracting inventors through the advertisement of toll-free numbers that inventors can call to request invention evaluation forms.¹⁸ Inventors return the forms with a full description of their designs and expect that their inventions will be evaluated by qualified experts.¹⁹ Unfortunately, the form is instead given to a salesperson who contacts the inventor and attempts to convince him or her to buy a research report for around \$500.²⁰ Although patentability opinions conducted by trained professionals are a necessary step in patent prosecution, the reports sold by many of these companies contain nothing more than boilerplate language which invariably concludes that the invention is patentable.²¹ This language is deceiving since it refers to obtaining a design patent, not a utility patent.²² Design patents are easy to obtain because they provide very narrow protection: they protect only the ornamental design of an object, not its function or utility.²³ Except for certain fields such as the furniture industry, a design patent is typically worthless when attempting to commercialize a product.²⁴

The next phase of the scheme usually involves convincing the inventor to buy patent and marketing services for \$7,000 to \$10,000.²⁵ In return, the inventor generally receives the insertion of a brief description of the invention in trade show catalogs and a few generic press releases.²⁶ In almost every case this marketing plan is unproductive.²⁷

During the course of the hearing regarding such practices, Sen. Lieberman was moved to note, "Necessity may be the mother of invention, but some of these companies are nothing more than

¹⁷ *Id.*

¹⁸ 141 CONG. REC. S8114, *supra* note 7.

¹⁹ *Id.*

²⁰ *Id.* Hundreds of these victims have said they were told by a bogus operator that they could protect their idea through a "poor man's patent": describing an idea and then mailing the information to themselves by registered mail and not opening the letter. Statement of Robert G. Lougher, *supra* note 8. Mailing an idea to yourself and not opening it does absolutely nothing but give inventors the false impression that their idea is now protected. *Id.*

²¹ 141 CONG. REC. S8114, *supra* note 7.

²² *Id.*

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

deadbeat dads.”²⁸ To exacerbate the problem, state and federal laws regarding such practices were vague and ineffective, allowing offending companies to escape liability by closing their doors and continuing to operate under a different name.²⁹ S. 909 was an attempt to “crack down on these scam artists” by including several provisions designed to separate the legitimate companies from the fraudulent ones.³⁰ First, the bill required invention marketing companies to register with the United States Patent and Trademark Office (“USPTO”).³¹ No new federal spending would have been required to fund this system, as it would be covered by fees accompanying the registrations and take advantage of the infrastructure in place for registering patent attorneys and agents.³² Second, companies would have also been required to provide a complete list of their officers so shady characters could not hide behind ever-changing corporate names.³³ Third, complaints against these companies would be tracked.³⁴ Fourth, the bill created standards for contracts between inventors and invention developers in order to help inventors make informed decisions about developers.³⁵ Finally, the bill allowed customers to void these contracts or sue for damages in federal court if the invention marketing company failed to meet any of these guidelines.³⁶ On June 5, the same day Sen. Lieberman introduced the bill, S. 909 was referred to the Senate Judiciary Committee.³⁷

B. Representative Moorhead, H.R. 2419, and Some “Add-ons”

In 1995, Rep. Moorhead was Chairman of the House Judiciary Committee’s Subcommittee on Intellectual Property and the Courts. On September 28, 1995, Rep. Moorhead introduced H.R. 2419 in the

²⁸ Statement of Robert G. Lougher, *supra* note 8.

²⁹ *Id.*

³⁰ 141 CONG. REC. S8115, *supra* note 7.

³¹ *Id.*

³² *Id.*

³³ *Id.* One former salesperson for an invention marketing company whose company changed names three times in less than six years to evade consumer action said, “You forgot sometimes what company you are working for.”

³⁴ *Id.*

³⁵ *Id.* One of these standards would require companies to attach a cover sheet to every contract listing the number of applicants the company has rejected and the number of customers who have actually earned a profit from their inventions, both of which are usually very small. *Id.*

³⁶ *Id.*

³⁷ *Id.*

House, a companion bill identical to Sen. Lieberman's S. 909.³⁸ At the time he introduced H.R. 2419, however, Rep. Moorhead was also pushing several other patent reform bills.³⁹ The first of several turns in the road toward the AIPA would soon be realized when H.R. 2419 was consolidated along with other patent reform measures to create a single omnibus patent reform bill. This consolidation would ultimately sink any chance of passage for the omnibus bill before the close of the 104th Congress.

1. A Plethora of Patent Reforms

From where did these other reform measures come? Several of these bills were related in some manner to provisions of the Uruguay Round Agreements Act ("URAA"), which was the result of negotiations between the United States and Japan under Global Agreement on Tariffs and Trade ("GATT").⁴⁰ Under the URAA, the United States agreed, among other things, to introduce legislation: 1) to require publication of patent applications 18 months from the earliest filing date; 2) to expand reexamination proceedings to allow greater participation by third parties; and 3) to change the length and tolling of patent terms.⁴¹ On May 25, H.R. 1732 was introduced to implement the U.S. commitment on expanded reexaminations, and H.R. 1733 was introduced for the 18-month publication commitment.⁴²

House Bill 1733 also incorporated a section that was designed to fix a problem created by the URAA arising from the change in the length and tolling of patent terms.⁴³ Under the URAA, the term of patents shifted from a 17 years from the date of issuance system to a

³⁸ 141 CONG. REC. H9670, *supra* note 11.

³⁹ H.R. 1659, 104th Cong. (1995); H.R. 1732, 104th Cong. (1995); 104 H.R. 1733, 104th Cong. (1995); 104 H.R. 2235, 104th Cong. (1995).

⁴⁰ Pub. L. No. 103-465, 108 Stat. 4809 (1994) (codified at 19 U.S.C. §§ 3501-3624 (1994)).

⁴¹ *Id.* Prior to this agreement, the USPTO maintained all patent applications in confidence during the pendency of prosecution, in contrast with most other countries. 35 U.S.C. 122 (2000). In addition, the 1980 Patent Act added procedures under which a patent owner or any other person may request that the USPTO reexamine any claim of a patent on the basis of cited prior art. 35 U.S.C. §§ 301-307. Although the person requesting reexamination may file a reply to the patent owner's statement during reexamination, only the patent owner may appeal any adverse determination by the examiner. *Id.*

⁴² H.R. 1732, *supra* note 39; H.R. 1733, *supra* note 39.

⁴³ H.R. 1733, *supra* note 39; *see also* Jane Applegate, *Inventors Turning to Congress for Help*, CHICAGO SUN-TIMES, 66, Oct. 18, 1995.

20 years from the date of filing system.⁴⁴ This change was made in part to address concerns about “submarine patents,” which applicants allegedly keep pending and secret until an industry with substantial investment in the technology can be targeted in an infringement suit.⁴⁵ The problem with this shift was that although the term was calculated from the date of filing, a patent was not awarded until after successful prosecution of the application before the USPTO; a process that can take several years.⁴⁶ In other words, for every day that an application spent in prosecution before the USPTO, that meant one less day out of the 20 year term that the patent could be asserted against potential infringers. Because it was not unheard of for prosecution time before the USPTO to take more than 3 years, the effective term for some patents after the URAA agreement took effect could be less than the original 17 years.⁴⁷ Provisions in H.R. 1733 were designed to minimize this problem by providing discretionary extensions to the term of any patents where delays in prosecution of the application were caused by the USPTO.⁴⁸

Also introduced in the House that spring and summer were two additional patent reform measures supported by patent law practitioners. Despite record increases in the number of patent applications filed with the USPTO, the number of employees had been capped at about 5,100 as part of the administration’s effort to reduce the size of the federal government.⁴⁹ As patent practitioners observed ever lengthening delays in prosecution times, groups such as the American Intellectual Property Law Association (“AIPLA”), the American Bar Association’s intellectual property section, and a trade group called the Intellectual Property Owners Inc. (“IPO”), lobbied for reforms that would improve the efficiency of the USPTO.⁵⁰ Toward that end, H.R. 1659 was introduced to establish the USPTO as a Government corporation.⁵¹ A second bill, H.R. 2235, was also backed by the AIPLA and sought to establish a defense in patent infringement suits for those who made a good faith commercial use of the subject matter of a patent prior to the earliest effective filing date of that

⁴⁴ Applegate, *supra* note 43 at 66.

⁴⁵ 51 Pat. Trademark & Copyright J. (BNA) 50 (1995).

⁴⁶ Applegate, *supra* note 43 at 66.

⁴⁷ *Id.*

⁴⁸ H.R. 1733, *supra* note 39.

⁴⁹ Mark Walsh, *Makeover in Works for Patent and Trademark Office*, THE RECORDER, July 13, 1995, at 1.

⁵⁰ *Id.*

⁵¹ H.R. 1659, *supra* note 39.

patent.⁵² Prior user rights are a common feature of patent laws outside the United States, and the AIPLA had long fought to introduce this feature into U.S. law under the banner of fairness and balance.⁵³

Thus, by the fall of 1995, the House had no less than five patent reform bills that had emerged from the Judiciary Committee's Subcommittee on Intellectual Property and the Courts. Some of these measures represented necessary amendments to the Patent Act required of the URAA. Another measure sought to rectify an unintended consequence of URAA relating to the change in patent term. Still other measures reflected the persistent lobbying of patent law practitioners. Finally, there was H.R. 2419, with its focus not on the patent practitioner or the lawmaker, but on the independent inventor and prospective patent holder. It would soon become apparent that these interest groups did not share the same views on a variety of matters.

2. Representative Rohrabacher's Opposition to H.R. 1733

Although Rep. Moorhead introduced several patent reform bills before the House in 1995, opposition to one in particular had drastic consequences for the rest. That fall, hearings were conducted by the House Subcommittee on Courts and Intellectual Property to review H.R. 1733.⁵⁴ Both proponents and critics voiced their positions on the new 20-year term and the proposal for early publication of patent applications.⁵⁵ One of the most outspoken critics of H.R. 1733 was Rep. Rohrabacher (R-Calif), who charged that this bill was a concession to Japan that would weaken the U.S. patent system.⁵⁶ Prior to the introduction of H.R. 1733, Rep. Rohrabacher had introduced his own bill to provide greater certainty for patent terms.⁵⁷ House Bill 359 set the new patent term at *either* 17 years from grant or 20 years from filing, whichever was longer.⁵⁸

On November 1, 1995, the House Subcommittee on Courts and

⁵² H.R. 2235, *supra* note 39; *see also Hearings on H.R. 2235 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*, 104th Cong. (1995) (statement of Robert A. Armitage, President of the American Intellectual Property Law Association).

⁵³ Statement of Robert A. Armitage, *supra* note 52.

⁵⁴ 51 Pat. Trademark & Copyright J. (BNA) 50 (1995).

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.*

Intellectual Property took up H.R. 1733 and H.R. 359 at a five-and-a-half-hour hearing.⁵⁹ Rep. Rohrabacher appeared as the first witness, and was challenged by the panel to support the claim that a 20-year-from-filing patent term would result in shortened protection for most patentees because of the time it takes the Patent and Trademark Office to issue patents.⁶⁰ The panel pointed to a recent study that indicated that the average patentee took only 19.5 months to get through the examination process, which meant that the average patentee would gain over a year to their patent term under the new system.⁶¹ Rep. Rohrabacher stated that the average applicant is irrelevant, since true breakthrough inventions can take much longer than 19.5 months to get through the examination process (e.g., 20 years for the laser and 17 years for the microprocessor).⁶² Rep. Rohrabacher also disputed claims that a 20-year from filing term is needed to deter submarine patents, stating that this argument presumes that inventors deliberately delay the patent process and ignores the fact that delays occur regularly as a result of USPTO inaction.⁶³ For these reasons, Rep. Rohrabacher argued, U.S. inventors need the certainty of at least 17 years of protection.⁶⁴

Furthermore, Rep. Rohrabacher sided with a panel of independent inventors, educators and patent practitioners that opposed the 18-month publication provision of H.R. 1733.⁶⁵ Rep. Rohrabacher maintained that the 1994 agreements with Japan that prompted this legislation was “a major catastrophe” for independent inventors and “a sweetheart deal” for Japan and big business.⁶⁶ Despite the fact that every other developed country has 18-month publication of patent applications, Rep. Rohrabacher stated that “other countries don’t value the rights of the individual as we do in the United States ...it’s because of the superiority of the U.S. patent that most inventions come from America.”⁶⁷ Under the new system, Rep. Rohrabacher predicted that patent lawyers for foreign companies would cull the USPTO files and fax published applications directly to competitors in Thailand, China,

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

Korea and Japan.⁶⁸ The cost of obtaining worldwide patent protection to avoid such piracy is particularly prohibitive to independent inventors, with estimates of up to \$250,000.⁶⁹

Thus, the interests of independent inventors were once again raised, but were at odds with many of the provisions of the several patent reform bills. In that regard, Rep. Rohrabacher's opposition to H.R. 1733 was representative of the conflicting interests at stake in these bills, and would pose a persistent problem for the remainder of the 104th Congress. In a particularly prescient observation, one reporter wrote later that Spring, "[t]he dispute may sink any bill's chances this year."⁷⁰

3. Biotechnology, Committee Mark-up, and H.R. 3460

In the Spring of 1996, Rep. Moorhead proposed a series of amendments to H.R. 1733, including a shift from discretionary to mandatory term extensions of patents due to prosecution delays caused by the USPTO, and the addition of objective definitions for "unusual administrative delay" by the USPTO.⁷¹ These changes were due in large part to the lobbying efforts of the Biotechnology Industry Organization ("BIO"). BIO was particularly interested in the patent term issue, since understaffing of examiners skilled in the biotechnological arts had led to long delays at the USPTO for patent applications covering biotechnological inventions.⁷² Accordingly, BIO supported language that would allow for the restoration of all time lost during review or appeal before the USPTO except for delays caused directly by applicants.⁷³ Until H.R. 1733 was modified to make such term extensions mandatory, BIO refused to support the bill.⁷⁴

On May 15, 1996, following the markup of H.R. 1733, the House Subcommittee on Intellectual Property and the Courts unanimously approved H.R. 3460, a single omnibus patent reform bill

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ Reginald Rhein, *Bill to Extend Life of Patents Approved by Judiciary*, BIOTECHNOLOGY NEWSWATCH, May 20, 1996 at 1.

⁷¹ *Hearings on H.R. 400 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*, 105th Cong. (1997) (statement of Chuck Ludlam, Vice President for Government Relations, Biotechnology Industry Organization).

⁷² 51 Pat. Trademark & Copyright J. (BNA) at 50.

⁷³ *Id.*

⁷⁴ Rhein, *supra* note 70 at 1.

co-sponsored by Rep. Moorhead and Rep. Schroeder (D-Colo.).⁷⁵ House Bill 3460 incorporated the five patent reform measures introduced by Rep. Moorhead the previous year: H.R.1659; H.R.1732; H.R.1733; H.R.2235; and H.R.2419.⁷⁶ Although the omnibus bill was an attempt to speed these patent reforms into law, H.R. 3460 had the effect of galvanizing opposition from independent inventor groups who criticized the bill as overly favorable to large corporate patent holders.⁷⁷

Given the overwhelming vote of the Subcommittee, it was hoped that Rep. Rohrabacher could be convinced to support H.R. 3460 instead of pushing for a showdown on the House floor with H.R. 359.⁷⁸ If such a showdown were to occur and Rep. Rohrabacher were to prevail, the resultant patent reform legislation would surely die in the Senate.⁷⁹ This was due to the fact that Sen. Orrin Hatch (R-Utah) was not expected to take up the Rohrabacher provision in the conference between the House and Senate on the legislation.⁸⁰

4. The Death of H.R. 3460

House Bill 3460 never made it to the House floor for a vote, partly due to a lack of consensus and partly because of a budget impasse that essentially brought the 104th Congress to a standstill.⁸¹ Rep. Rohrabacher did not back down, and continued his vocal opposition to H.R. 3460.⁸² The fate of the patent legislation for the 104th Congress ultimately rested with House Majority Leader Dick Armey (R-Texas), who controlled the floor schedule.⁸³ Given the backdrop behind H.R. 3460, Rep. Armey's communications director Michael Franc said in mid August: "My gut reaction is that we're not going to deal with it."⁸⁴

The close of the 104th Congress not only saw the quiet death of H.R. 3460, but the retirement of key players in the legislative

⁷⁵ H.R. 3460, 104th Cong. (1996)

⁷⁶ *Id.*

⁷⁷ Mark Walsh, *IP Impasse*, THE RECORDER, August 19, 1996, at 1.

⁷⁸ Rhein, *supra* note 70 at 1.

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ Lisa Seachrist, *HR 400 Would Extend Patent Terms Past 20 Years for Delays*, BIOWORLD TODAY, January 16, 1997, at 10; *see also* Dan Goodin, *PTO Reform Bill Moves Ahead*, THE RECORDER, March 10, 1997, at 1.

⁸² 142 CONG. REC. H6718-02 (Statement by Rep. Rohrabacher, June 25, 1996).

⁸³ Walsh, *supra* note 77 at 1.

⁸⁴ *Id.*

drama. Representatives Moorhead and Schroeder both retired from Congress when the session closed in October of 1996.⁸⁵ Someone would have to pick up the flag to carry the patent reform measures forward in the 105th Congress. As it turned out, that person was the new Chairman of the House Subcommittee on Intellectual Property and the Courts and another co-sponsor of H.R. 3460, Rep. Howard Coble (R-N.C.).⁸⁶

III. THE 105TH CONGRESS

On January 9, 1997, Rep. Coble introduced H.R. 400, which was nearly identical to H.R. 3460 from the 104th Congress.⁸⁷ In addition to the provisions carried over from H.R. 3460, the new bill provided a guarantee of 18.5 years of patent exclusivity and inventors would also be compensated for any delays within the patent office due to interference proceedings.⁸⁸ These changes were the result of a Manager's Amendment that was developed with the Senate, the Clinton administration, and the House Government Reform and Oversight Committee, and would have been offered the previous year if H.R. 3460 had been scheduled for a vote in the full House.⁸⁹ Despite the fact that proponents of H.R. 400 appeared to have the upper hand over the opposition during the 105th Congress, the form of the bill that would ultimately be passed and signed into law as the AIPA emerged during the 106th Congressional session.

A. Representative Coble, H.R. 400, and Rohrabacher's Threat

Just as Rep. Coble resurrected H.R. 3460 in the form of H.R. 400, Rep. Rohrabacher reintroduced H.R. 359 as H.R. 811.⁹⁰ Consequently, the bills retained the same backers, with H.R. 400 supported by such groups as the AIPLA, and H.R. 811 supported by independent inventors.⁹¹ House Bill 400 quickly gained momentum

⁸⁵ *Congressional Bill to Sabotage Constitutional Right, Says the National Patent Association*, PR NEWSWIRE, June 12, 1996, Financial News.

⁸⁶ Seachrist, *supra* note 81 at 10.

⁸⁷ H.R. 400, 105th Cong. (1997).

⁸⁸ Seachrist, *supra* note 81 at 10.

⁸⁹ *Hearings on H.R. 400 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*, 105th Cong. (1997) (statement of Chairman Coble).

⁹⁰ H.R. 811, 105th Cong. (1997); *see also* Goodin, *supra* note 81 at 1.

⁹¹ Goodin, *supra* note 81 at 1.

under the assertive leadership of Rep. Coble, however, and was unanimously approved by the House Subcommittee on Intellectual Property and the Courts in early March.⁹² In contrast, H.R. 811 was tabled.⁹³

Despite the fact that H.R. 811 was tabled, its backers continued to pose a threat to H.R. 400. As the press secretary for Rep. Rohrabacher stated in March of 1997, “[t]he real debate on these bills will come when they come onto the floor...At that time we would offer our legislation as a substitute amendment.”⁹⁴ Rep. Rohrabacher continued to maintain that the 18-month publication provision of H.R. 400 would allow large multinational corporations to misappropriate technology from independent inventors, and went so far as to nickname H.R. 400 the “Steal American Technology Bill.”⁹⁵ On the issue of the tolling of patent terms, Rep. Rohrabacher included “anti-submarine” provisions in H.R. 811 as a concession to criticisms that his method of determining patent terms would allow such dilatory practices by patent applicants to continue.⁹⁶ The relevant question, however, was whether such concessions would be sufficient to overcome the swelling tide of support gathering behind Rep. Coble’s H.R. 400.

B. The House Floor and a Compromise

On April 16, 1997, the positions of both the supporters and the opponents of H.R. 400 were heard in a six-hour debate on the floor of the House of Representatives.⁹⁷ A week later, on April 23, H.R. 400 would be presented for a vote.⁹⁸ As threatened, Rep. Rohrabacher was poised to offer H.R. 811 as an alternative, and had been working to rally his allies around his bill.⁹⁹ Unfortunately for him, a compromise proposal reaching out to independent inventors would simultaneously consolidate support for H.R. 400 while mitigating the Rohrabacher threat.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ Joanne Hayes-Rines, *Some Call It Reform*, INTELLECTUAL PROPERTY TODAY, July, 1997, at 44.

⁹⁸ Lisa Seachrist, *HR 400 Wins Patent Legislation Clears House; Now It's Up To Senate*, BIOWORLD TODAY, April 25, 1997, at 80.

⁹⁹ *Id.*

On April 23 on the House floor, Rep. Marcy Kaptur (D-OH) offered an amendment to H.R. 400 that made the 18 month publication requirement optional for small businesses and individual inventors.¹⁰⁰ This exemption siphoned support from H.R. 811 and allowed H.R. 400 to pass on a unanimous voice vote.¹⁰¹ With some of the wind out of its sails, H.R. 811 was voted down 227 to 178.¹⁰² A version of the omnibus patent reform bill had finally made it through the gauntlet of the House. The scene would now shift to the Senate, where Sen. Orrin Hatch (R-Utah) was pushing H.R. 400's companion bill: S. 507.¹⁰³

C. Senator Hatch and S. 507

Sen. Hatch introduced S. 507 in the Senate on March 20, 1997.¹⁰⁴ In an effort to show bipartisan support for the bill, Sen. Patrick Leahy (D-VT) worked closely with Sen. Hatch on S. 507 in the Senate.¹⁰⁵ Hearings were held on May 7, 1997, and the bill was reported out of the Senate Judiciary Committee on May 22, 1997, with substantial changes.¹⁰⁶ The new S. 507 altered the 18-month publication provision to exempt any patent applicant who was not also filing patent applications abroad.¹⁰⁷ In addition, the new S. 507 made the requirements for claiming prior user rights more stringent.¹⁰⁸

Unfortunately, the lobbying efforts of independent inventors and small businesses would pose problems for the legislation once again. As soon as S. 507 came out of the Senate Judiciary Committee, Sen. Christopher Bond (R-MO), chairman of the Senate Small Business Committee, and Sen. Trent Lott (R-Miss) mounted Republican opposition to “put a hold” on it, due in part to the provisions providing prior user rights.¹⁰⁹ Despite efforts to “reign in” these rights, independent inventors and small businesses still felt that prior user rights would have disparate impact upon them.¹¹⁰ This was

¹⁰⁰ Jim Abrams, *House Moves on Bill to Overhaul Patent System*, THE ASSOCIATED PRESS NEWSWIRE, April 17, 1997.

¹⁰¹ Seachrist, *supra* note 98 at 80.

¹⁰² Abrams, *supra* note 100.

¹⁰³ S. 507, 105th Cong. (1997).

¹⁰⁴ *Id.*

¹⁰⁵ 144 CONG. REC. S10717 (1998) (statement of Sen. Leahy).

¹⁰⁶ Hayes-Rines, *supra* note 97 at 44.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

due to the fact that such rights would presumably make it easier for industries to circumvent licensing arrangements with smaller companies and independent inventors over patented business methods.¹¹¹ These potential circumventions would put a large dent in revenues for entities whose profitability is tied to a relatively shallow pool of intellectual property assets. The omnibus patent reform bill was still a lightning rod for criticism, and the rhetoric was about to escalate as noted conservative pundit Phyllis Schlafly became increasingly visible in her opposition to the bill.

1. Phyllis Schlafly and the Nobel Laureates

Several sources of opposition to S. 507 emerged in the Summer and Fall of 1997 which considerably slowed progress of the bill in the Senate. In a strange twist to the debate, Phyllis Schlafly, the celebrated anti-feminist who helped sink the Equal Rights Amendment, began a series of columns denouncing S. 507.¹¹² Schlafly is the founder of the “Eagle Forum,” an organization she describes as “a conservative, pro-family group” that opposes abortion rights and federal spending on the arts.¹¹³ By the Fall, the Eagle Forum’s number one priority was to block S. 507.¹¹⁴

As with many groups whose efforts are driven by a single powerful individual, the Eagle Forum tended to lobby for a variety of issues that were tied closely to Schlafly’s interests. As it turns out, Schlafly became interested in patent law in the late 1980s after serving on the committee to celebrate the bicentennial of the Constitution.¹¹⁵ She became so impressed with the Constitution’s protection of patents that she made a documentary about the role of patent rights in

¹¹¹ Phyllis Schlafly, *Hatch’s Attack on Inventors’ Constitutional Rights*, COPLEYS NEWS SERVICE, July 1, 1997 [hereinafter Schlafly I].

¹¹² See, e.g., Schlafly I, *supra* note 111 at A4; Phyllis Schlafly, *Measure Backs Big Firms, Hurts Small Business*, CHATTANOOGA FREE PRESS, July 14, 1997, p. A4 [hereinafter Schlafly II]; Phyllis Schlafly, *Nobel Laureates Denounce Hatch’s Patent Bill*, COPLEYS NEWS SERVICE, Oct. 12, 1997, Commentary [hereinafter Schlafly III]; Phyllis Schlafly, *26 Nobel Laureates Blast “Piracy Bill,”* CHATTANOOGA FREE PRESS, Oct. 14, 1997, p. A4 [hereinafter Schlafly IV]; Phyllis Schlafly, *The Ominous Attack on American Inventors*, COPLEYS NEWS SERVICE, Mar. 2, 1998, Commentary [hereinafter Schlafly V].

¹¹³ Louis Jacobson, *From the K Street Corridor*, THE NATIONAL JOURNAL, Sept. 13, 1997, at 1785.

¹¹⁴ Louis Jacobson, *The Eagle Has Landed*, THE NATIONAL JOURNAL, Oct. 25, 1997, at 2154.

¹¹⁵ Jacobson, *supra* note 113 at 1785.

American history.¹¹⁶

With respect to S. 507, Schlafly maintained that the bill was an ominous attack on independent inventors, calling the bill the result of a game plan by the lobbyists for “foreigners and multinationals” to steal American technology.¹¹⁷ Pointing to another proposal pushed by Sen. Hatch to extend the term of copyrights, Schlafly accused Hatch, who owns the copyright to several religious songs he wrote, of selling out individual inventors while favoring individual copyright holders.¹¹⁸ According to Schlafly, “S. 507 has no redeeming value.”¹¹⁹

Sharing in Schlafly's opposition to S. 507 were a number of Nobel Prize-winning scientists, who agreed with the argument that the bill would prove damaging to American small inventors.¹²⁰ In the Fall of 1997, 26 Nobel Laureates in economics, physics, chemistry, and medicine sent an open letter to the U.S. Senate urging opposition to the passage of S. 507.¹²¹ The letter maintained that provisions for 18-month publication and prior user rights would curtail the protection obtained through patents for small businesses and individual inventors relative to large multi-national corporations, and thus would discourage the flow of new inventions.¹²² As stated individually by Dr. Franco Modigliani, 1985 winner of the Nobel Prize for Economics, the Nobel Laureates shared the view that S. 507 “is against the spirit of the U.S. patent system, which is a great economic and cultural invention.”¹²³

Amid these attacks, Sen. Hatch attempted to push forward with S. 507. Over the next year, he would seek Senate consideration and a vote, but Republican objections would prevent its passage.¹²⁴ Further sparks would fly when a last minute attempt to get the bill passed by the Senate would involve what critics would label a “surreptitious” attempt to “blindside Senators opposed to his legislation.”¹²⁵

¹¹⁶ *Id.*

¹¹⁷ Schlafly II, *supra* note 111 at A4.

¹¹⁸ Schlafly II, *supra* note 111 at Commentary.

¹¹⁹ Schlafly II, *supra* note 111 at A4.

¹²⁰ Schlafly III, *supra* note 111 at Commentary.

¹²¹ *Id.*

¹²² *Id.*

¹²³ Schlafly IV, *supra* note 111 at A4.

¹²⁴ 144 CONG. REC. S12734 (1998) (Statement of Sen. Leahy).

¹²⁵ *Senate Set to Vote on Destruction of U.S. Patent System Thursday*, PR NEWSWIRE, September 16, 1998, Financial News.

2. Riding the Coattails of a Bankruptcy Bill

On September 17, 1998, the Senate was scheduled to vote on a new bankruptcy law that would no longer allow citizens to include credit card debt in bankruptcy declarations.¹²⁶ Senators Hatch and Leahy reserved an amendment spot with the intention to attach S. 507 as a secondary amendment to the bankruptcy bill when it was presented for a vote.¹²⁷ Opponents characterized the move as an attempt to allow the bill to “become law before most U.S. citizens even know about it.”¹²⁸

Critics charged that it was “totally illogical, irrational and unreasonable to attach major patent reform legislation to a bankruptcy bill.”¹²⁹ Sen. Leahy maintained that such a tactic was justified given Republican recalcitrance in preventing the bill from reaching the floor for a vote on its own accord.¹³⁰ When the bankruptcy bill finally went up for a vote, however, Republican objections prevented the amendment from even being offered.¹³¹ The omnibus patent reform legislation died once again.¹³²

The phoenix would rise from the ashes once more in the 106th Congress. A compromise bill would emerge in the House between Representatives Coble and Rohrabacher.¹³³ The omnibus patent reform legislation would then be subjected to the gauntlet of the Senate once more, undergoing several changes before enactment in its final form as the AIPA.¹³⁴

IV. THE 106TH CONGRESS

At the opening of the 106th Congress, the projected path of patent reform legislation looked familiar in some respects, and utterly unique in others. Representatives Coble and Rohrabacher were expected to introduce competing legislation in the House similar to

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ 144 CONG. REC. S10719 (1998) (statement of Sen. Leahy).

¹³¹ 144 CONG. REC. S12734 (1998) (statement of Sen. Leahy).

¹³² Brenda Sandburg, *High-Tech Bills Move to Front Burner on Hill*, THE RECORDER, October 12, 1998, at 2.

¹³³ Shawn Zeller, *A Ruckus Over Patent Reform*, THE NATIONAL JOURNAL, September 18, 1999, at 2640.

¹³⁴ Slind-Flor, *supra* note 1 at B15.

H.R. 400 and H.R. 811 from the 105th Congress.¹³⁵ Sen. Hatch was also expected to re-introduce patent-reform legislation in the Senate, but any Senate Bill was anticipated to lag the House due to the Senate's preoccupation with the impeachment trial of President Clinton.¹³⁶ Before the end of the year, however, a bill would be passed in both the House and Senate, and signed into law by the President.

A. The Coble-Rohrabacher Compromise

Perhaps it was the losses that both sides of the patent reform struggle had suffered in the House over the prior four years, but a new political atmosphere was apparent in the House during the first few months of 1999.¹³⁷ Rep. Coble held a subcommittee hearing on March 25 regarding the draft of a new bill, a draft with which Rep. Rohrabacher was mostly in agreement.¹³⁸ On the issue of patent term, Rohrabacher was no longer demanding a return to the former patent system, and supported Coble's provision restoring lost time for all prosecution delays in the USPTO and the courts, as long as the patent applicant was not the source of those delays.¹³⁹ The presence of a prior user defense in the draft bill was still a point of contention, although Rohrabacher stated that he might support a narrower application specifically for the growing and controversial area of business method patents.¹⁴⁰

By early May, Rep. Rohrabacher announced that an agreement had been reached with Rep. Coble on the draft bill.¹⁴¹ On May 24, 1999, Representatives Coble and Rohrabacher introduced H.R. 1907 after unanimous approval by the House Subcommittee on Intellectual Property and the Courts.¹⁴² The bill, dubbed the AIPA for the first time, retained a provision that only required publication of an application after 18 months if the applicant is also applying for

¹³⁵ Mark Crawford, *Industry Registers Hope For Patent-Reform Law*, NEW TECHNOLOGY WEEK, February 1, 1999, at 1.

¹³⁶ *Id.*

¹³⁷ Lisa Seachrist, *Foes Mainly in Agreement Congress Taking Initial Step Toward Patent-System Reform*, BIOWORLD TODAY, March 30, 1999, at 1.

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ Brenda Sandburg, *Accord Nearing on Patent Bill*, THE RECORDER, April 1, 1999, at 1.

¹⁴¹ *Rohrabacher Announces Agreement on Patent Overhaul*, NATIONAL JOURNAL'S CONGRESSIONAL DAILY, May 7, 1999, at 1.

¹⁴² H.R. 1907, 106th Cong. (1999).

protection in other countries.¹⁴³ The bill also included a prior user defense that would be limited to business process and method patents.¹⁴⁴

Despite Rohrabacher's concessions, Schlafly and the main organization claiming to represent small inventors, the Alliance for American Innovation, still opposed the new draft bill.¹⁴⁵ Speaking about Rohrabacher, inventor Ronald J. Riley said, "[h]e's a Benedict Arnold. We invested a lot of money in giving him a high profile, and then he turns around and says the problems have been fixed, when they weren't."¹⁴⁶ Unfortunately for them, with Rep. Rohrabacher on board the bill was expected to move rather quickly through the House.¹⁴⁷

Several additional mark-ups of H.R. 1907 occurred in subcommittee meetings regarding details of reexamination and the restructuring of the USPTO.¹⁴⁸ Due to the delicate nature of the compromise negotiated in subcommittee, Rep. Rohrabacher requested that the full House suspend the rules to prevent amendment of the bill on the House floor.¹⁴⁹ This request prompted several Representatives to object to the lack of consideration, substantial debate, and open discussion of the bill.¹⁵⁰ On August 4, 1999, however, the rules were suspended and the House passed H.R. 1907, by a margin of 376 to 43.¹⁵¹

B. Fast Track in the Senate

Representatives Coble and Rohrabacher urged Sen. Hatch to move a new patent reform measure to the floor without altering the delicate compromises contained in the House bill.¹⁵² Rohrabacher said

¹⁴³ *Id.*

¹⁴⁴ *Id.* A spokesman for Rep. Rohrabacher argued that such a narrow application was justified because, "[i]n the past, you couldn't get a patent on business methods. Since there is not a lot of prior art out there, this gives those who have been using a method a protection." Sandburg, *supra* note 140 at 1.

¹⁴⁵ Sandburg, *supra* note 140 at 1.

¹⁴⁶ Zeller, *supra* note 133 at 2640.

¹⁴⁷ *Id.*

¹⁴⁸ Michael J. Mehrman, *HR1907 -- The American Inventors Protection Act of 1999*, INTELLECTUAL PROPERTY TODAY, August, 1999, at 28.

¹⁴⁹ *Id.*

¹⁵⁰ 145 CONG. REC. E1756-57 (1999).

¹⁵¹ 145 CONG. REC. H6973 (1999).

¹⁵² Zeller, *supra* note 133 at 2640.

he received positive feedback from the legislation's longtime opponents in the Senate, Senators Lott and Bond.¹⁵³ Advocates for the bill were braced for a battle, despite a temporary setback when Sen. Shelby (R-Ala.) blocked Sen. Hatch's effort to move the legislation to the floor before the August recess.¹⁵⁴ Opponents seemed to recognize that a bill was imminent, however, as exemplified by the remarks of a Senate aide whose boss placed a hold on the bill the year before, "This thing is getting to be like having your wisdom teeth removed. You don't want to drag it out any more than you have to."¹⁵⁵

The real question was no longer whether a bill would pass, but whether a bill would pass before the recess in late Fall. With the congressional session down to its final days, any bill was unlikely to pass both chambers before recess, but Senate strategists surmised that they might be able to pass a version of the Senate bill that was so close to the House version that they could avoid the cumbersome conference committee process.¹⁵⁶ This would involve a committee of members from both chambers that would create one patent reform bill to be sent to the President for his signature.¹⁵⁷ If the Senate and House bills were close enough, however, this process could potentially be avoided by bringing House action down to a single floor vote on the Senate bill.¹⁵⁸

1. The Home Stretch

Through negotiations with Representatives from the House, Senators Hatch and Leahy sought to hit a home run by creating a single \$385 billion spending package out of three intellectual property bills: 1) the Anti-Cybersquatting Consumer Protection Act ("Anti-Cybersquatting Act"); 2) the Intellectual Property and Satellite Omnibus Reform Act ("Satellite Home Viewer Act"); and 3) the AIPA.¹⁵⁹ The Anti-Cybersquatting Act sought to allow trademark owners to sue Internet users who register famous or trademarked names with the intention of either selling those domain names for

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ John Schwartz, *Inventors Criticize Patent Proposal, House Passes Measure, Senate Puts it on Fast Track*, CHICAGO SUN-TIMES, November 5, 1999, at 41.

¹⁵⁷ Hayes-Rines, *supra* note 97 at 44.

¹⁵⁸ Shwartz, *supra* note 156 at 41.

¹⁵⁹ David McGuire, *Hatch, Leahy Praise IP Provisions In Budget*, NEWSBYTES, November 19, 1999, at 1.; H.R. 3194, 106th Cong. (1999).

profit or using them for other commercial purposes.¹⁶⁰ The Satellite Home Viewer Act clarified broadcasting copyright issues in a manner that would allow head-to-head competition between cable and satellite television.¹⁶¹

2. Rural Television

The ultimate goal of the Satellite Home Viewer Act was to eventually eliminate the hodgepodge of hit-and-miss station signals in rural areas by creating an environment where most stations could be viewed by all home satellite owners no matter their location.¹⁶² The final version of the bill facilitated this, but not as strongly as originally desired. The bill stalled in November when Banking Committee Chairman, Sen. Phil Gramm (R-Tex.) objected on jurisdictional grounds to the inclusion of a federal loan program designed to make local television available over satellite to as many as 60 million people in rural America.¹⁶³ Sen. Gramm maintained that the program should have been handled by his committee.¹⁶⁴ With the recess looming, the provision was excised from the final version of the bill.¹⁶⁵

3. Dairy Cattle

Other more general objections remained, including a threat by Sen. Herb Kohl (D-Wisc.) to partially shut down the government.¹⁶⁶ Sen. Kohl's threat arose from his opposition to a rider contained in the bill that would overturn reforms of the government's milk pricing system and would extend for two years the Northeast Dairy Compact, which allowed six New England states to set their own milk prices.¹⁶⁷ Sen. Kohl had said he would do everything he could to delay the bill as long as possible to protest the anti-reform provisions.¹⁶⁸

¹⁶⁰ *Id.*

¹⁶¹ *Final Agreement on Home Satellite TV Bill Reached Thursday Morning*, U.S. NEWSWIRE, November 18, 1999, National and State Desks.

¹⁶² *Id.*

¹⁶³ *Content and Online Communities Resolve Webcasting Issue*, COMMUNICATIONS DAILY, November 17, 1999, at 1.

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ Frank A. Aukofer, *Milk Pricing Fight Delays Budget Bill*, MILWAUKEE JOURNAL SENTINEL, November 19, 1999, at 1.

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

Because the omnibus bill included budget provisions for five government departments, a continuing resolution was required to keep the government operating until the budget bill was finally passed.¹⁶⁹ The House passed two continuing resolutions, but similar resolutions in the Senate were held up due to Sen. Kohl's objections.¹⁷⁰ Ultimately, Sen. Kohl said he could not bring himself to be responsible for partially shutting down the federal government, stating, "I am not an irresponsible person ...[s]hutting down the government is a huge, huge decision. I am not going to make that decision over this issue."¹⁷¹

While Sen. Kohl may not have wanted to partially shut down the government, he did pursue other avenues of protest. He started his campaign by forcing the Senate clerk to read the entire omnibus bill, and soon followed up with a filibuster.¹⁷² Despite his efforts, however, cloture was invoked with an 87 to 9 vote on November 19, 1999, exceeding the necessary three-fifths vote by a wide margin.¹⁷³ On the same day, the Senate approved the omnibus budget bill on a 74 to 24 vote.¹⁷⁴ Because the House had already voted on a conference report of the bill the day before by a vote of 296 to 135, the bill was cleared to go to the President.¹⁷⁵

C. President Clinton

On November 29, 1999, ten days after the vote in the Senate, President Bill Clinton signed the AIPA into law.¹⁷⁶

V. EPILOGUE

After a long arduous process, the AIPA was finally law. What started in part as an attempt to protect independent inventors from unscrupulous con-artists mutated into a sweeping patent reform bill that independent inventors argued would prejudice their rights and cripple American innovation. Although the final version of the bill was a compromise, the extent to which individual interest groups benefited

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² *Id.*

¹⁷³ 145 CONG. REC. S14986 (1999).

¹⁷⁴ 145 CONG. REC. S15058 (1999).

¹⁷⁵ 145 CONG. REC. H12819 (1999).

¹⁷⁶ Public L. No. 106- 113, *supra* note 3.

or lost varied widely. In addition, the turmoil surrounding its passage reflected the significant increase in recent years of lobbying efforts regarding intellectual property issues.

A. Winners and Losers

Legislative winners included patent practitioners and the biotechnology industry. Patent practitioners benefited most from provisions that were not as hotly contested as others: reforms that would allow for the modernization of practices by the USPTO by giving the agency slightly greater independence without removing it from the Department of Commerce.¹⁷⁷ Mike Kirk of the AIPLA lauded the legislation as one of the most important patent reforms ever, saying that it would put American inventors on equal footing with their foreign counterparts.¹⁷⁸ Conversely, the biotechnology industry benefited most from the day-for-day term extensions provided under the AIPA for prosecution delays, since biotechnological inventions traditionally suffered disproportionately longer prosecution times before the USPTO compared to other technologies.

Ironically, the legislative losers were primarily independent inventors and small businesses. Despite new protections against invention development companies, many of the lobbyists for the independent inventors were disgusted by the reform and felt betrayed by Rep. Rohrabacher. Kevin Delaney, president of the National Patent Association, a nationwide organization that represents independent inventors, said “I thought Rohrabacher was our savior, but now I feel sure he convinced the Republican leadership to jump to the other side... [w]e took the stand that there was no surrender and I thought we had enough backing to stop this thing.”¹⁷⁹ Although he conceded that compromises in the bill had made it somewhat more palatable, Delaney drew the following comparison: “A good analogy is knowing that you’re about to be shot. The only question is do you want it in the head or the knee. We took it in the knee. We’re hurting, but we’re not dead.”¹⁸⁰

¹⁷⁷ Slind-Flor, *supra* note 1 at B15.

¹⁷⁸ David McGuire, *Hatch, Leahy Praise IP Provisions In Budget*, NEWSBYTES, November 19, 1999, at 1.

¹⁷⁹ Kelly Patricia O'Meara, *A Stealth Attack on Patent Rules*, INSIGHT ON THE NEWS, January 31, 2000, at 20.

¹⁸⁰ *Id.*

B. Intellectual Property and the Legislative Process

When it comes to intellectual property legislation, much of the substantive work is usually concentrated in the first year of the two-year legislative cycle.¹⁸¹ Oversight or background hearings are usually held to determine the need for legislation, followed by drafting of bills and hearings of the bills themselves.¹⁸² Legislators seek to find common ground after receiving input from interest groups, or at least ground that can garner a majority vote.¹⁸³ The 106th Congress was unusual in this regard, accomplishing almost all of its substantive work in the intellectual property arena in the first year of the legislative cycle.¹⁸⁴ This was due to the fact that much of this work had been carried out in earlier Congresses, and the AIPA was already fully developed at the opening of the 106th Congress.¹⁸⁵ Having consumed the lion's share of the House and Senate Judiciary Committees' agendas during that time, the 106th Congress substantially diminished its intellectual property activity in the second year of the legislative cycle.¹⁸⁶

In a review of intellectual property legislation from 1900 to 2000, Robert Merges states that intellectual property legislation became more important in the closing years of the twentieth century than it was in earlier years.¹⁸⁷ This conclusion is based upon several factors. First, in general, more law was created through legislation than in previous years.¹⁸⁸ Second, intellectual property assets grew in economic importance at the same time that courts increased the strength of the property rights that attach to them.¹⁸⁹ One byproduct of this increased importance is reflected in the battle toward enactment of the AIPA: the marked increase in Congressional lobbying in this area.¹⁹⁰

¹⁸¹ Hayden Gregory, *The 106th Congress: A Fast Start and a Slow Finish*, INTELLECTUAL PROPERTY LAW NEWSLETTER, Winter, 2001, at 1.

¹⁸² *Id.*

¹⁸³ *Id.*

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ Robert P. Merges, *One Hundred Years Of Solicitude: Intellectual Property Law, 1900-2000*, 88 CALIF. L. REV. 2187, 2234 (2000).

¹⁸⁸ *Id.*

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

As explained by Merges, such a shift is not necessarily disturbing given the complexity of the subject matter.¹⁹¹ In other words, interest groups for which intellectual property rights are a significant contributor to the bottom line will understandably increase their spending on lobbying simply in order to educate legislators and their staffs.¹⁹² There is a danger, however, for private influences to skew the benefits of legislation toward a small number of specific beneficiaries at the expense of the general public.¹⁹³ The potential for skewed legislation is most prominent where the costs of such benefits are spread over a large number of consumers over a long period of time, thus diminishing the perceived cost and decreasing the chance that organized opposition will mount their own lobbying efforts.¹⁹⁴

As an example of such an effect, Merges cites the Sonny Bono Copyright Term Extension Act of 1998.¹⁹⁵ With the copyright on Mickey Mouse set to expire in 2003, the Walt Disney Company pushed for a law in the 105th Congress that would grant a 20-year extension on all copyrighted works.¹⁹⁶ With added support from the motion picture industry, the result was a new law that extends the copyright term for individual artists from life-plus-fifty years to life-plus-seventy years, and allows studios to keep copyrights for ninety-five years.¹⁹⁷ Merges argues that the major beneficiaries of this Act are current copyright owners and not future creators of copyrightable material, since an extension of twenty years to the copyright term is negligible with respect to incentives to create new copyrightable works.¹⁹⁸ In addition, the cost of this benefit falls on consumers, but in a way in which they will pay individually in small doses over a long period of time.¹⁹⁹ Therefore, there was little in the way of effective lobbying against the Act.

Where such clear imbalances exist in effective lobbying for statutes that are drawn close to a line drawn by the Constitution,

¹⁹¹ *Id.* at 2235.

¹⁹² *Id.*

¹⁹³ *Id.* at 2236.

¹⁹⁴ *Id.*

¹⁹⁵ *Id.*; Pub. L. No. 105-298, 112 Stat. 2827 (1998) (codified in scattered sections of 17 U.S.C.).

¹⁹⁶ *Id.* at n. 218, citing Center for Responsive Politics, *No lights, no camera, lots of action: Behind the Scenes of Hollywood's Washington Agenda* (Oct. 11, 1998), <http://www.opensecrets.org/alerts/v4/alrtv4n35.asp> (last visited Dec. 12, 2006).

¹⁹⁷ *Id.*

¹⁹⁸ *Id.* at 2236.

¹⁹⁹ *Id.*

Merges argues that it should be relevant upon judicial review that only industry groups were represented during the drafting of the statute.²⁰⁰ For example, where a private bill granting a term extension for a specific patent was tucked into an unrelated piece of legislation,²⁰¹ such an inquiry could tip the scales toward a finding of invalidity. The issue could then be re-addressed by Congress, with closer attention to the balances implicated by the Intellectual Property Clause of the Constitution.²⁰²

With respect to the enactment of the AIPA, however, the type of imbalance in effective lobbying described above seemed to have been avoided. Groups representing individual inventors were able to gain the support of Rep. Rohrabacher and make their voices heard.

Although some of these lobbyists felt betrayed by Rep. Rohrabacher's compromises, their collective efforts not only killed patent bills in the 104th and 105th Congresses, but forced concessions such as a narrower prior user defense that was limited to business process and method patents.²⁰³ Their inability, however, to prevent other provisions such as the requirement for publication of applications after 18 months, is not indicative of a general failure in the legislative process with respect to intellectual property. On the contrary, their efforts provided just the kind of appropriate counterweight that Merges warns may not be present in all industry-backed intellectual property legislation.

VI. CONCLUSION

What started as a bill to prevent unscrupulous invention development firms from exploiting independent inventors evolved into the AIPA, a \$390 billion omnibus spending bill that implemented the biggest changes to patent law since 1952. Over the course of four years, this process brought together such seemingly strange bedfellows as Phyllis Schlafly and 26 Nobel Prize-winning scientists, who shared a mutual opposition to proposed changes to the patent laws. Ultimately, the AIPA included patent law reform measures, bills to extend the time and scope of compulsory licensing for retransmission

²⁰⁰ *Id.* at 2237.

²⁰¹ *Id.* at 2238; see, e.g., *Claritin Maker Hires Top Lobbyists for Patent Bid*, DALLAS MORNING NEWS, May 14, 1999, at 6A (describing pharmaceutical firm Schering-Plough's efforts to obtain a private patent bill to extend the life of their patent on the allergy drug Claritin).

²⁰² Merges, *supra* note 187 at 2239.

²⁰³ H.R. 1907, 106th Cong. (1999); Sandburg, *supra* note 140 at 1.

of television broadcasting, anti-cybersquatting measures, and a host of add-ons. Although the field of intellectual property law seems to have escaped partisan politics in recent Congresses, partisan differences on other issues often have a spillover effect on intellectual property matters. The legislative history of the AIPA stands as an example of this fact.

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