

The Printed Publication Bar and the Price of Publicly Available Information*

The U.S. patent system represents a bargain struck between inventors, the government, and the public—a “quid pro quo” that gives inventors a twenty-year monopoly over their invention in exchange for a publicly available description of their invention within the patent. Inherent in this bargain is the idea that if an invention is already publicly available, it should not be awarded a patent because an inventor has no right to take information out of the public domain and prevent others from using it. This idea is codified in the printed publication bar in the America Invents Act, which prevents prospective patentees from obtaining patents on inventions that have already been described in publicly available printed publications.

In Centripetal Networks v. Cisco Systems, the Federal Circuit held that a password-protected user manual secured behind a \$25,000 paywall was sufficiently available to the public, and the court invalidated Centripetal’s patent under the printed publication statutory bar. In doing so, the Federal Circuit raised the standard for the reasonable diligence required to consider a document accessible to the public. This Recent Development argues that the decisions in the Centripetal Networks cases are inconsistent with the goals of the U.S. patent system and only further cements the patent system’s dichotomy between corporate patent owners and individual inventors and small businesses.

INTRODUCTION

A patent is like a social contract between an inventor and the public. An inventor invests time and money into developing an invention and is rewarded with a patent—a limited monopoly of twenty years, during which time the inventor may prevent others from making, using, or selling that invention.¹ In exchange, the patent includes a detailed explanation of the invention and how to make it, introducing that knowledge into the public domain while protecting the patentee’s right to exclude.² However, this social contract breaks down when a prospective patentee attempts to patent an invention that is already within the public domain. Such a scenario is statutorily barred by the printed

* © 2023 Leah Ehler.

1. See 35 U.S.C. §§ 154(a)(2), 271(a); see also Peter Lee, *Patents and the Pandemic: Intellectual Property, Social Contracts, and Access to Vaccines*, 17 WASH. J.L. TECH. & ARTS 193, 208 (2022).

2. See 35 U.S.C. § 112. A patent must contain a written description of the invention, such that a person skilled in the art would be able to make the invention. See *id.*

publication bar, found in the America Invents Act (“AIA”), which prevents prospective patentees from obtaining patents on inventions that have already been described in publicly available printed publications.³ But what constitutes a printed publication available to the public for purposes of the AIA, and how should the cost to access that printed publication factor into this analysis?

The Federal Circuit answered that question in *Centripetal Networks v. Cisco Systems*⁴ by holding that a password-protected user manual secured behind a paywall, but available to the public for purchase at a high price, qualified as a printed publication that rendered Centripetal Networks’ patent invalid.⁵ In order to qualify as a printed publication that can invalidate a patent, the document must be publicly available such that a person interested in the subject matter could access it using reasonable diligence.⁶ The decision in *Centripetal Networks I* set a new standard for reasonable diligence—one that includes the payment of \$25,000 to access the printed publication.⁷ This Recent Development contends that the Federal Circuit incorrectly classified the user manual in the *Centripetal Networks* cases as a printed publication because reasonable diligence and public availability of information should not be conditioned on the ability to pay a large sum of money. *Centripetal Networks I* undermines the purpose of the patent system by locking a new invention behind a \$25,000 door—a door that can easily be opened by interested corporations, but will likely remain closed for the general public.

This Recent Development proceeds in three parts. Part I explains the statutory requirements for obtaining a patent, as well as how a printed publication that discloses the claimed invention may bar an applicant from obtaining a patent. Part II discusses the Federal Circuit’s recent decision in *Centripetal Networks I*, and Part III argues that the *Centripetal Networks I* decision does not align with the justifications for the U.S. patent system, but actually undermines the social contract between inventors and the public.

3. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 3(b)(1), 125 Stat. 284, 285–86 (codified at 35 U.S.C. § 102 (2011)).

4. (*Centripetal Networks I*), 847 F. App’x 869 (Fed. Cir. 2021).

5. *Id.* at 876–78, 881. A patent is “invalid” if it fails to comply with the requirements set forth by the U.S. Patent and Trademark Office (“USPTO”) for patentability. See Roger Allan Ford, *Patent Invalidity Versus Noninfringement*, 99 CORNELL L. REV. 71, 78 (2013).

6. *In re Hall*, 781 F.2d 897, 899–900 (Fed. Cir. 1986).

7. See *Centripetal Networks I*, 847 F. App’x at 878. Note that the Federal Circuit issued two separate opinions related to the controversy between Centripetal Networks and Cisco, and these opinions reference each other for detailed explanations of specific issues. See *Centripetal Networks, Inc. v. Cisco Sys., Inc. (Centripetal Networks II)*, 847 F. App’x 881, 882, 885, 887 (Fed. Cir. 2021).

I. PATENTABILITY & PUBLIC DISCLOSURES

A. *The America Invents Act's Novelty Requirement*

The AIA sets forth the requirements that an inventor must satisfy in their patent application to be granted a patent on an invention.⁸ One of the AIA's most important requirements is found in Section 102,⁹ which requires that a claimed invention be novel in order to be granted a patent.¹⁰ To be novel, certain situations must not exist.¹¹ Those situations are referred to as “bars” that preclude the U.S. Patent and Trademark Office (“USPTO”) from granting a patent, and they include, among others, the printed publication bar.¹² If a claimed invention has already been described in a patent or publication, or is otherwise available to the public, it is expressly considered not novel by statute.¹³ In other words, if the public is already aware of the claimed invention, it cannot be considered new information that is worthy of granting the inventor a limited monopoly over the technology.

The statutory bars in § 102 may seem harsh because an inventor can be denied a patent based on a printed publication of which they were completely unaware, but the patent system was not designed to reward independent creation of a known invention.¹⁴ Rather, patents only reward new and novel inventions.¹⁵ Modern patent law is not concerned with who invented the technology first, only who files a patent application first.¹⁶ The printed publication bar and other statutory bars exist to preserve the integrity of the social contract between inventors and the public by refusing to grant an

8. Leahy-Smith America Invents Act, § 3(b)(1), 125 Stat. 284, 285–87 (2011) (codified as amended at 35 U.S.C. § 102 (2011)).

9. *Id.*

10. *Id.*

11. 35 U.S.C. § 102(a).

12. *See id.* § 102(a)(1). The other statutory bars are the on-sale bar, which applies if the invention is offered for sale to the public, and the public-use bar, which applies when the invention is being used by the public. *See id.*

13. *Id.*

14. *See* Mala Chatterjee, *Intellectual Property, Independent Creation, and the Lockean Commons*, 12 U.C. IRVINE L. REV. 747, 793 (2022) (comparing the independent creation defense available in copyright law to patent law, where independent creation is not a defense).

15. *Id.*

16. In 2013, the United States switched from a first-to-invent to a first-to-file regime. *See* 35 U.S.C. § 100 note (Effective Date of 2011 Amendment; Savings Provisions). Under the first to invent regime, a challenger could allege that they were the first inventor of the technology in an interference proceeding before the USPTO, even if they did not file a patent application first. *See* U.S. PAT. & TRADEMARK OFF., U.S. DEP'T OF COM., MANUAL OF PATENT EXAMINING PROCEDURE § 2138.91 (9th ed. 2023) [hereinafter MPEP] (explaining the basis of interference practice). If successful, the patent would be invalidated in favor of the challenger who is considered the first inventor in fact. *Id.* Since the Patent Act was amended, the United States has followed a first-to-file regime, which simplifies disputes over inventorship by giving priority to the first person to file a patent application, regardless of whether they actually conceived of the invention first. *See* 35 U.S.C. § 102(a)(2).

inventor a limited monopoly over an invention that is already part of the public domain.¹⁷ In that scenario, the contract breaks down because the inventor benefits from being able to enforce its patent against others, while the public is harmed because it can no longer freely use the technology described in the patent.¹⁸

Even if an inventor happens to create a product while completely unaware of the existence of any publicly available knowledge about that product, it would be unfair to grant that inventor a patent and a limited monopoly on the invention.¹⁹ Such a scenario would remove that knowledge from the public domain, which is inconsistent with a major goal of patent law—to promote the public dissemination of knowledge and innovation.²⁰ Thus, an exception for inventors who independently invent a product that is already within the public domain would undermine the social contract that patents represent.

U.S. patent law does provide some relief from the statutory bars discussed above in the form of a one-year grace period.²¹ If the inventor or a joint inventor publicly discloses their invention through publication, use, or sale, the statutory bar will not take effect for one year.²² The inventor must file a patent application for the invention within that year to prevent § 102 from barring the patent.²³

B. *What Is a Printed Publication?*

The term “printed publication” is not defined by statute.²⁴ Instead, courts must engage in a “case by case inquiry into the facts and circumstances surrounding the [information]’s disclosure to members of the public”²⁵ to make a legal conclusion regarding whether such disclosure constitutes a printed publication under § 102.²⁶ Additionally, the Federal Circuit has held that the term “printed publication” does not require a reference to be physically printed

17. See Andrew R. Sommer, *Trouble on the Commons: A Lockean Justification for Patent Law Harmonization*, 87 J. PAT. & TRADEMARK OFF. SOC’Y 141, 155 (2005) (explaining the Lockean natural rights theory of patent protection).

18. See *id.*

19. See *id.*

20. See *id.*

21. See 35 U.S.C. § 102(b)(1).

22. See 35 U.S.C. § 102(b)(1)(A). The same exception applies to a public disclosure made by someone other than the inventor if the information was obtained from the inventor directly or indirectly. *Id.*

23. See *id.*

24. See 35 U.S.C. §§ 100, 102.

25. *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004).

26. *Suffolk Techs. v. AOL, Inc.*, 752 F.3d 1358, 1364 (Fed. Cir. 2014).

on tangible paper.²⁷ Instead, the focus is on whether the reference is publicly available.²⁸

The threshold for determining whether a reference is publicly available is relatively low. The key consideration is whether the publication is sufficiently available to the public such that a person interested in the art, or subject matter of the invention, could locate it by “exercising reasonable diligence.”²⁹ For example, in *In re Hall*,³⁰ a doctoral dissertation was cited by the USPTO during the patent application process against a patent applicant as a printed publication to bar the patent.³¹ On appeal, the Federal Circuit rejected the applicant’s argument that the dissertation was not sufficiently available to the public even though there was only one physical copy of it in existence, and the copy was located in Freiburg University’s library in Germany.³² The dissertation was held to be a printed publication that barred the applicant’s patent.³³

However, a publication must be “catalogued or indexed in a meaningful way” such that a researcher could locate it using reasonable diligence.³⁴ In *In re Cronyn*,³⁵ a student thesis was held not to be a printed publication that would bar a patent application because it was indexed by student author name rather than subject in the university’s library.³⁶ The court reasoned that because the student’s name “bears no relationship to the subject of the student’s thesis,” an interested person exercising reasonable diligence would not be able to access the publication.³⁷ Therefore, the thesis was not publicly available and did not bar the patent.³⁸

27. *In re Wyer*, 655 F.2d 221, 226 (C.C.P.A. 1981).

28. *Id.* The term “printed publication” was introduced in the patent statutes in 1836, when printing was the primary means of publicly disseminating information. *Id.* at 226 & n.3 (citing Patent Act of 1836, 5 Stat. 117). Thus, the emphasis is on whether a reference is publicly available rather than physically printed. *See id.* at 226.

29. *In re Hall*, 781 F.2d 897, 899–900 (Fed. Cir. 1986). A person interested in the art is someone who knows, understands, or is interested in the subject matter or field of the invention. *See* MPEP, *supra* note 16, § 2128.01, for a discussion of public accessibility to those interested or concerned with the art.

30. 781 F.2d 897 (Fed. Cir. 1986).

31. *Id.* at 897. Foldi’s dissertation was submitted to the Freiburg University in Germany in September 1977, and Hall filed his patent application in February 1979. *Id.*

32. *See id.* at 897, 899–900. Furthermore, although the Patent Board could not establish a specific date that the dissertation was catalogued and available to the public, the court found that a specific date is not required. *Id.* at 899. It was sufficient that the library had a standard general practice in place that would have made it likely that the dissertation was available to the public before the critical date, one year prior to the patent application filing date. *Id.*

33. *Id.* at 900.

34. *See In re Cronyn*, 890 F.2d 1158, 1161 (Fed. Cir. 1989).

35. 890 F.2d 1158 (Fed. Cir. 1989).

36. *See id.* at 1161.

37. *Id.*

38. *See id.*

In the *Centripetal Networks* cases, the Federal Circuit was faced with a question of first impression: Is a document stored on a password-protected website that requires customers to pay \$25,000 to access it publicly available, such that the document is a printed publication that could bar a patent application? As Part II explains, the court reestablished that the public availability threshold is low by holding that the document was publicly available and barred the patent at issue in the case.

II. CENTRIPETAL NETWORKS V. CISCO SYSTEMS

In September 2018, Cisco Systems (“Cisco”) petitioned the Patent Trial and Appeals Board (“PTAB”) for an *inter partes review* (“IPR”) of all claims in Centripetal Networks’ (“Centripetal”) U.S. Patent No. 9,413,722 (“’722 patent”).³⁹ As a result of the IPR, the PTAB found that twenty of the twenty-five claims in the ’722 patent were invalid in light of a printed publication that would have made the claimed invention obvious to a relevant artisan.⁴⁰ Centripetal appealed to the Federal Circuit.⁴¹ Section II.A will begin with a brief discussion of the IPR process as the foundation for Section II.B, which explains the holding in *Centripetal Networks I*.

A. An Explanation of Inter Partes Review

Both the PTAB and the IPR proceeding were created in 2012 with the enactment of the AIA.⁴² Upon the filing of a petition by a third party, the PTAB may initiate an IPR proceeding to “review the patentability of one or more claims in a patent.”⁴³

Any person, excluding the patent’s owner, may file a petition with the PTAB to initiate an IPR—which has adjudicatory functions similar to a court proceeding—challenging the validity of a patent.⁴⁴ The patentability of an

39. See *Centripetal Networks II*, 847 F. App’x 881, 882 (Fed. Cir. 2021). Patents have several parts: a specification, drawings, and the claims. Gene Quinn, *Understanding Patent Claims*, IPWATCHDOG (July 12, 2014, 8:00 AM), <https://ipwatchdog.com/2014/07/12/understanding-patent-claims/id=50349/> [<https://perma.cc/C4ND-DELU>]. The claims are the most important part because they specifically explain, and claim, the invention protected by the patent. *Id.* Courts will look to the rest of the patent document for further understanding of the invention, but the claims provide the legal definition of the invention and the boundaries of the patent owner’s right to exclude others. *Id.*

40. *Centripetal Networks II*, 847 F. App’x at 882.

41. *Id.*

42. See Leahy-Smith America Invents Act, Pub. L. No. 112-29, §§ 6(a)(1), 7(a)(1), 125 Stat. 284, 299, 313 (2011) (codified as amended at 35 U.S.C. §§ 6, 311(a)).

43. *Inter Partes Review*, U.S. PAT. & TRADEMARK OFF., <https://www.uspto.gov/patents/ptab/trials/inter-partes-review> [<https://perma.cc/R86Y-CKLQ>] (last modified Oct. 10, 2022).

44. 35 U.S.C. § 311(a). An IPR may be instituted to challenge the validity of any patent issued before, on, or after September 16, 2012, which is when the statute creating the procedure took effect. See *Inter Partes Review*, *supra* note 43.

invention is determined statutorily, with the relevant sections related to patentability being sections 101, 102, 103, and 112.⁴⁵ An IPR may only be initiated to challenge a patent under sections 102 or 103, so sections 101 and 112 will not be discussed in detail here.⁴⁶

Sections 102 and 103 of the code require that an invention be novel and nonobvious in order to obtain a patent.⁴⁷ Inquiries into both novelty and nonobviousness involve an analysis of prior art, which includes “all information and documentation that is available to the public in any form, such as published materials, commercial activity, and other patents.”⁴⁸ To be novel and nonobvious, the invention must be sufficiently different from prior art to be considered patentable.⁴⁹ However, during an IPR initiated for the purpose of invalidating a patent under sections 102 or 103, the court may only consider patents and printed publications as prior art.⁵⁰

In *Centripetal Networks II*, the Federal Circuit considered whether a user guide distributed to purchasers of a security network system qualifies as a printed publication that can be used to invalidate a patent in an IPR proceeding under 35 U.S.C. § 311(b).⁵¹ The court affirmed the decision of the PTAB in the

45. See 35 U.S.C. §§ 101–03, 112; see also Gene Quinn, *Patentability Overview: When Can an Invention Be Patented*, IPWATCHDOG (June 3, 2017, 10:30 AM), <https://ipwatchdog.com/2017/06/03/patentability-invention-patented/id=84071/> [<https://perma.cc/TX83-TVNV>]; Gene Quinn, *Patentability: The Novelty Requirement of 35 U.S.C. 102*, IPWATCHDOG (June 10, 2017, 9:45 AM), <https://ipwatchdog.com/2017/06/10/patentability-novelty-requirement-102/id=84321/> [<https://perma.cc/758A-ZMUE>]; Gene Quinn, *Patentability: The Nonobvious Requirement of 35 U.S.C. 103*, IPWATCHDOG (June 17, 2017, 10:00 AM), <https://ipwatchdog.com/2017/06/17/patentability-nonobviousness-35-usc-103/id=84716/> [<https://perma.cc/CTU4-W959>]; Gene Quinn, *Patentability: The Adequate Description Requirement of 35 U.S.C. 112*, IPWATCHDOG (June 24, 2017, 9:15 AM), <https://ipwatchdog.com/2017/06/24/patentability-adequate-description-requirement-35-u-s-c-112/id=85039/> [<https://perma.cc/4U63-9YEL>].

46. 35 U.S.C. § 311(b). Section 101 of the Patent Act requires an invention to be a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court has held that “laws of nature, natural phenomena, and abstract ideas” are not patentable. *Diamond v. Dierh*, 450 U.S. 175, 185 (1981). Section 112 requires a patent application to contain a written description “in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use” the invention claimed in the patent. 35 U.S.C. § 112.

47. See 35 U.S.C. §§ 102, 103.

48. Henry Heines, *Patents: Crossing the Novelty Threshold*, AM. INST. OF CHEM. ENG’RS (Nov. 2015), <https://www.aiche.org/resources/publications/cep/2015/november/patents-crossing-novelty-threshold> [<https://perma.cc/YV7K-RHZL>].

49. See *id.* The novelty inquiry considers whether one prior art reference describes the entire claim in a patent, and, if it does, the patent is invalid because it has been anticipated by prior art. See MPEP, *supra* note 16, § 2131. The obviousness inquiry similarly compares the patent claim to prior art, but multiple prior art references may be combined to prove that the claimed invention would be an obvious creation if a person of ordinary skill in the art read those prior art references together. See *id.* § 2141.

50. 35 U.S.C. § 311(b) (explaining the scope of IPRs and what materials may be used to invalidate a patent).

51. See *Centripetal Networks II*, 847 F. App’x 881, 882 (Fed. Cir. 2021).

prior IPR proceeding and held that the user manual was a printed publication that rendered Centripetal's '722 patent claims invalid for obviousness.⁵²

B. Centripetal Networks v. Cisco Systems

Centripetal's '722 patent describes a “rule-based network-threat detection’ system” that uses particular “network-threat indicators” to detect potential threats to a network’s security.⁵³ The petitioner, Cisco, alleged that the network-threat indicators had been previously disclosed in a printed publication, specifically, a user guide for a network security system sold by a cybersecurity solution company, Sourcefire, which Cisco acquired in 2013.⁵⁴ Cisco’s IPR petition relied on the Sourcefire user guide to invalidate Centripetal’s '722 patent under Section 102 of the AIA, which, as described in Section I.B, bars a claimed invention from patent protection if the invention has previously been disclosed in a printed publication.⁵⁵ To invalidate the '722 patent based on the Sourcefire user guide as a printed publication, Cisco was required to prove that the Sourcefire user guide (1) disclosed the same information as the claimed invention in the '722 patent, and (2) was a printed publication.⁵⁶

The Federal Circuit affirmed the PTAB’s ruling that the Sourcefire user guide described the claimed invention in the '722 patent.⁵⁷ The Sourcefire guide instructed users on how to develop custom “intrusion rules” based on specific criteria that will direct the security system to take action on threats that meet the specified criteria.⁵⁸ For example, a user may create a rule that directs the system to generate a response based on “multiple failed log-in attempts . . . from an unknown IP address.”⁵⁹ Similarly, the '722 patent claimed a “packet-filtering device” that receives specific rules based on certain parameters that correspond to network-threat indicators in order to generate a network response to a potential security threat.⁶⁰ Based on these similarities, the Federal Circuit affirmed the PTAB’s IPR holding that the Sourcefire user guide described the claimed invention in Centripetal Networks’ '722 patent, and held that the first

52. See *Centripetal Networks II*, 847 F. App’x at 887. For an understanding of the AIA’s nonobvious requirement, see 35 U.S.C. § 103.

53. *Centripetal Networks II*, 847 F. App’x at 882.

54. See *id.* at 884; see also Press Release, Cisco, Cisco Announces Agreement To Acquire Sourcefire (July 23, 2013), <https://newsroom.cisco.com/press-release-content?type=webcontent&articleId=1225204> [https://perma.cc/REP5-KB28].

55. See *Centripetal Networks II*, 847 F. App’x at 884; see also Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 3(b)(1), 125 Stat. 284, 285–86 (codified at 35 U.S.C. § 102(a)(1) (2011)).

56. See 35 U.S.C. § 102; see also MPEP, *supra* note 16, § 2152.

57. See *Centripetal Networks II*, 847 F. App’x at 887–88.

58. See *id.* at 884. Example criteria include “protocol, source and destination Internet Protocol (IP) addresses, and source and destination ports.” *Id.*

59. *Id.*

60. See *id.* at 886.

requirement for patent invalidity—that the Sourcefire user guide disclosed the same information as the claimed invention in the '722 patent—was met.⁶¹

The Federal Circuit also affirmed the PTAB's holding that the Sourcefire user guide was a printed publication within the meaning of the AIA and could be used to invalidate a patent based on novelty or nonobviousness.⁶² According to the Manual of Patent Examining Procedure ("MPEP"), which provides guidelines to patent examiners on procedures and practices regarding the issuance of patents,⁶³ a reference will be considered a publicly available printed publication if it "has been disseminated or otherwise made available" in such a way that a person "interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it."⁶⁴

In this case, Centripetal argued that the Sourcefire user guide was not a printed publication because it was not publicly available for two reasons: (1) the guide was "kept on a password-protected website and only available to Sourcefire purchasers," and (2) "the Sourcefire product was costly, with a purchase price of up to \$25,000."⁶⁵ The Federal Circuit rejected these arguments and found that the user guide was sufficiently available to the public so as to be considered a printed publication, barring patent protection and invalidating Centripetal's patent.⁶⁶

The Federal Circuit considered several factors when determining whether the Sourcefire user guide qualified as a printed publication available to the public: (1) "the expertise of the target audience," (2) "the avenues of distribution (*e.g.* at a trade show)," (3) "the duration of dissemination," and (4) "expectations of confidentiality or restrictions on recipients' sharing of the information."⁶⁷ The Sourcefire user guide was distributed to customers who

61. *See id.* at 887–88 (rejecting Centripetal Networks' argument that the Sourcefire user guide was limited to whitelisting IP addresses rather than using source-identifiers). The standard for determining whether a printed publication discloses a claimed invention is whether a relevant artisan skilled in that field would have understood the publication to teach the claimed invention. *See id.* at 888. Like in most cases, the Federal Circuit relied on expert testimony to determine that a skilled artisan would have understood the Sourcefire user guide to teach the "filtering packets on the basis of network-threat identifiers" claimed in the '722 patent. *Id.*

62. *See id.* at 887.

63. MPEP, *supra* note 16, Foreword.

64. *Id.* § 2128. The MPEP is published by the USPTO to instruct patent examiners on how to review patent applications and includes interpretations of patent case law, but it is not a binding legal authority on courts. *See* Sarah Goodman, *MPEP – Everything You Wanted To Know About Patents (but Were Afraid To Ask)*, UNIV. NOTRE DAME (Jan. 24, 2013), <https://sites.nd.edu/patentlaw/2013/01/24/mpep-everything-you-wanted-to-know-about-patents-but-were-afraid-to-ask/> [<https://perma.cc/4L4R-68KQ>]; Louis Kachulis, *Intellectual Property*, USC GOULD SCH. L. (July 12, 2021, 12:04 PM), <https://lawlibguides.usc.edu/c.php?g=542724&tp=3719095> [<https://perma.cc/NR5Q-T646>].

65. *Centripetal Networks II*, 847 F. App'x at 884–85.

66. *See id.* at 886–87.

67. *Centripetal Networks I*, 847 F. App'x 869, 877 (Fed. Cir. 2021).

purchased certain Sourcefire products in two ways—the guide was either sent to the customers on a CD-ROM or it was available for download online to customers with a valid password.⁶⁸ Testimony during the IPR proceeding revealed that during the relevant two-year period between the Sourcefire publication and the '722 filing date, 586 Sourcefire customers received the user guide with their purchase.⁶⁹ Further, customers were explicitly permitted to “use, print out, save . . . and otherwise copy and distribute” the user guide.⁷⁰ Based on these factors, the Federal Circuit determined that the user guide had been disseminated to a sufficiently large number of customers without restrictions on use.⁷¹ Therefore, it was a printed publication that could invalidate a patent if found to anticipate the claimed invention or make it obvious.⁷²

Furthermore, the Federal Circuit did not find the high cost of the Sourcefire products “prohibitive to those interested and of skill in the art,” citing the 586 customers that were able to purchase the products.⁷³ Thus, the Federal Circuit held that a publication that costs \$25,000 is sufficiently available to a person exercising reasonable diligence to locate the publication.⁷⁴

III. THE PRICE TO PAY FOR PUBLIC AVAILABILITY

Although it was denied, Centripetal made several persuasive arguments in their petition for writ of certiorari to the U.S. Supreme Court.⁷⁵ Centripetal argued that considering a reference “publicly available” despite that reference’s \$25,000 purchase price undermines the purpose of the patent system.⁷⁶ Centripetal argued that the purpose of granting a patent and giving the inventor a limited monopoly over that technology is to give the public knowledge of that invention.⁷⁷

The printed publication bar exists to prevent inventors from patenting an invention that is already known to the public.⁷⁸ If the law allowed an inventor

68. See *Centripetal Networks II*, 847 F. App'x at 884.

69. See *Centripetal Networks I*, 847 F. App'x at 875, 877.

70. *Id.*

71. *Id.* at 878.

72. *Id.*

73. *Id.*

74. *Id.*

75. See Petition for Writ of Certiorari, *Centripetal Networks I* (Nos. 20-1635, 20-1636, 20-2057).

76. *Id.* at 1.

77. See *id.* at 9.

78. See Shubha Ghosh, *Patents and the Regulatory State: Rethinking the Patent Bargain Metaphor After Eldred*, 19 BERKELEY TECH. L.J. 1315, 1319–20 (2004) (“[I]f the public were already in possession and common use of an invention fairly and without fraud, there might be sound reason for presuming, that the legislature did not intend to grant an exclusive right to any one to monopolize that which was already common. There would be no quid pro quo—no price for the exclusive right or monopoly conferred upon the inventor for fourteen years.” (quoting *Penncock v. Dialogue*, 27 U.S. 1, 23 (1829))). Note that patents now have a term of twenty years. 35 U.S.C. § 154(a)(2).

to do so, the social contract between inventors and the public would break down.⁷⁹ The inventor would benefit from a limited monopoly over the technology, but the public would be harmed because that technology is no longer available for them to use. Therefore, the printed publication bar serves as an important protection for free use of public knowledge. However, the bar must be applied in a way that preserves the social contract between *both* inventors and the public.

The Federal Circuit's holding in *Centripetal Networks I* did not preserve the social contract that patents represent. Instead, it denied patent protection to an inventor, disincentivizing further innovation in the area, because it considered a document that costs \$25,000 to be publicly available.⁸⁰ At the same time, the court did not ensure that public knowledge remained within the public domain, but instead kept it locked behind a \$25,000 paywall. This part examines the current landscape of patent holders, which is dominated by large corporations, and analyzes the holding in *Centripetal Networks I* in light of corporate patent dominance.

A. *The Dichotomy of the Patent System*

If Sourcefire's user manual is considered publicly available, to *whom* is it publicly available? Major corporations account for a substantial percentage of patent holders in the United States—as of 2020, nearly ninety-five percent of all U.S. patents are held by domestic and foreign corporations, with the remainder of patents held by governments or individuals.⁸¹ Even the range of corporate patents is highly concentrated in a few patentholders—fifty companies hold about thirty percent of patents.⁸² Significant resources are required to hire attorneys to draft a patent, prosecute it before the USPTO, and litigate possible future infringements of the patent.⁸³ For major corporations, these costs can easily be built into operating budgets. For startups, small businesses, and entrepreneurs, it can be difficult to see the benefit of expending

79. See *id.*; *supra* Introduction.

80. See *Centripetal Networks I*, 847 F. App'x 869, 877–78 (Fed. Cir. 2021).

81. See *A Patent Technology Monitoring Team Report*, U.S. PAT. & TRADEMARK OFF. (Mar. 23, 2022, 2:08 PM), https://www.uspto.gov/web/offices/ac/ido/oeip/taf/topo_20.htm#Desc [<https://perma.cc/4C32-EKEC>].

82. See Samuel Stebbins, *The World's 50 Most Innovative Companies*, USA TODAY (Jan. 12, 2018), <https://www.usatoday.com/story/money/business/2018/01/12/worlds-50-most-innovative-companies/1023095001/> [<https://perma.cc/8GVD-SSCC>].

83. See James Bessen & Michael J. Meurer, *Lessons for Patent Policy from Empirical Research on Patent Litigation*, 9 LEWIS & CLARK L. REV. 1, 2 (2005) (“Patent litigation has been called the sport of kings; it is complex, uncertain, and expensive.”). Depending on the amount of money at risk in a patent suit, the average cost of discovery ranges from \$290,000 to \$2.5 million, and the average cost of litigation ranges from \$500,000 up to almost \$4 million. *Id.*

limited resources to apply for patents or enforce current ones when the patent system is dominated by “[l]arge technology Goliaths.”⁸⁴

Corporations constitute the majority of patent litigants, molding and shaping patent law to serve corporate interests.⁸⁵ Given this understanding of the U.S. patent holder landscape, it is not surprising that the Federal Circuit considered a \$25,000 user manual to be publicly available. For a large corporation, such a user manual certainly is available through reasonable diligence and a \$25,000 check. However, for the rest of the public, the holding in the *Centripetal Networks* cases only further solidified the idea that patents primarily benefit wealthy corporations and that courts will continue to approach patent issues through the lens of large corporations rather than individuals.

Individual inventors already face more obstacles to obtaining patents than large corporations. Notwithstanding the effort and cost required to invent new technologies, attorney’s fees to research prior art, write the patent, and file it with the USPTO can cost an inventor anywhere from a few thousand dollars to over \$16,000.⁸⁶ The *Centripetal Networks* cases further disincentivize individual inventors by effectively adding \$25,000 to the patent prosecution bill. Consider the following scenario—an inventor spends years and thousands of dollars on a patent application, only to be barred by a printed publication that could not be found in a prior art search without paying \$25,000 to access it. How likely is the inventor to even start the patent application process in the face of such an obstacle?

Of course, a patent applicant will never be able to find every source that could possibly be cited as prior art against them during the application process, as that is nearly impossible and not economically viable.⁸⁷ Nonetheless, the *Centripetal Networks* cases further disincentivize individual inventors from not only applying for patents, but possibly from inventing new technologies altogether if they feel uncertain about their ability to obtain a patent. The court’s emphasis on corporate interests may harm society in the long run if inventors are unable to realize the benefits promised by the patent system and the social contract it represents.

84. Petition for Writ of Certiorari, *supra* note 75, at 1.

85. See Paul M. Janicke & LiLan Ren, *Who Wins Patent Infringement Cases?*, 34 AIPLA Q.J. 1, 21–22 (2006) (comparing the win rates of individual versus corporate patentees and finding that there is a statistical significance to whether a patent litigant is an individual or a corporation, specifically that “[c]orporate patentees had better results”).

86. Gene Quinn, *The Cost of Obtaining a Patent in the US*, IPWATCHDOG (Apr. 4, 2015, 3:05 PM), <https://ipwatchdog.com/2015/04/04/the-cost-of-obtaining-a-patent-in-the-us/id=56485/> [<https://perma.cc/6RT4-FXHU>].

87. *Id.*

B. *General Public Versus Corporate Public Availability*

When faced with the question of whether a person “interested and ordinarily skilled in the subject matter or art” of Centripetal’s invention could access the Sourcefire user manual by “exercising *reasonable diligence*,”⁸⁸ the Federal Circuit answered yes.⁸⁹ *Centripetal Networks II* set a new standard for reasonable diligence, one in which a \$25,000 hurdle does not prevent the public from accessing a printed publication. However, that hurdle is only likely to be overcome by corporations, not the general public.

The Federal Circuit’s holding in *Centripetal Networks II* only strengthens the divide between corporate patent holders and individual entrepreneurs. It signals to society that patents are primarily for those who can afford them, like large corporations, rather than smaller independent inventors. The purpose of granting patents to inventors is to incentivize innovation—without patents to protect inventions, inventors would use trade secrets instead, which would be detrimental to public knowledge.⁹⁰

The holding in *Centripetal Networks II* begs the question—who is the patent system really designed to benefit? Under the theory of patents as a social contract, it should evenly benefit the public and the inventor.⁹¹ So long as patents are granted, inventors are rewarded with a limited monopoly over their inventions.⁹² Similarly, so long as patents are granted, the public benefits from receiving information about the inventions, although they cannot make or use them for twenty years due to the limited monopoly granted to the inventors.⁹³ In the case of *Centripetal Networks II*, does the public benefit?

The goal of invalidating a patent based on the printed publication bar is to return knowledge to the public that was within the public domain.⁹⁴ Once

88. MPEP, *supra* note 16, § 2128 (emphasis added).

89. *Centripetal Networks II*, 847 F. App’x 881, 886–87 (Fed. Cir. 2021).

90. See Petition for Writ of Certiorari, *supra* note 75, at 1–2. As the name suggests, companies who wish to protect their inventions through trade secret must keep the knowledge of how to make and use the invention completely secret. The public gets no benefits through trade secret protection, other than ability to buy the invention from the company holding it as a trade secret. A popular trade secret is the Coca-Cola soda recipe, which has never been protected by patents and is unknown to the public. See Orly Lobel, *Filing for a Patent Versus Keeping Your Invention a Trade Secret*, HARV. BUS. REV. (Nov. 21, 2013), <https://hbr.org/2013/11/filing-for-a-patent-versus-keeping-your-invention-a-trade-secret> [<https://perma.cc/KBS8-W88U> (dark archive)]; *Coca-Cola’s Formula Is at the World of Coca-Cola*, COCA-COLA CO., <https://www.coca-colacompany.com/company/history/coca-cola-formula-is-at-the-world-of-coca-cola> [<https://perma.cc/7XH8-Q4UR>].

91. See Lee, *supra* note 1, at 208–09.

92. See 35 U.S.C. § 154(a)(2).

93. See *id.*

94. See Ford, *supra* note 5, at 78 (explaining the invalidity doctrine that ensures “an inventor has meaningfully contributed to society before he or she is rewarded with a monopoly”). Invalidity doctrines also “ensure that the patent bargain is a good one for society: because society generally gains little or nothing from the independent invention of technologies that already exist . . . no reward is necessary to encourage their creation.” *Id.* at 79.

the patent is invalidated, the public is free to continue using the information that was once within the public domain but removed due to the patent. For Centripetal Networks, can the public truly use the knowledge that was returned to the public domain? The Federal Circuit essentially answered yes, but only if the public can afford to pay \$25,000 for it. By doing so, the Federal Circuit conditioned the availability of information on the public's ability to pay, solidifying the idea that the patent system is designed to benefit only a portion of the public—the corporate public.

Public availability of information should not depend on the willingness and ability of a person to pay for it. The Federal Circuit did not take this into account in its analysis of whether Sourcefire's user manual was a printed publication in *Centripetal Networks I*. The result is that Centripetal's patents were invalidated on the grounds that reasonable diligence to access a publication may include the ability to pay large sums of money for that access.⁹⁵

The holding in *Centripetal Networks I* neither aligns with nor furthers the goals of patent law. It does not promote disclosure of new innovations. Instead, it encourages large corporations to keep information locked behind expensive paywalls, inaccessible to the general public, and then use it to invalidate other patents that seek to disclose the invention and add to the sum of public knowledge.⁹⁶ The practical effect of the Federal Circuit's holding was to essentially remove information from the public domain by invalidating Centripetal's patents—which were published and available to anyone at no cost—under the reasoning that the information contained within those patents is already available within Sourcefire's user manual. However, for the general public that is not a large corporation and is unable to pay \$25,000 to access Sourcefire's user manual, a description of the technology involved in Centripetal's invention was never publicly available and accessible.

In the specific case of Centripetal's rule-based network threat detection invention, the information regarding that invention is still publicly available through its patent, even though it has been invalidated.⁹⁷ The real problem is for future patent applications—patent examiners may now use costly prior art references, like the Sourcefire user manual, to deny a patent based on the reasoning in *Centripetal Networks*. In such a scenario, the only source of information regarding that invention would be the costly document that was used to deny the patent. Without the ability to pay, that information would remain outside the reach of most of the public. This result is antithetical to a very important goal of the patent system—promoting public knowledge of new inventions and incentivizing innovation through patent applications. The

95. See *Centripetal Networks I*, 847 F. App'x 869, 878 (Fed. Cir. 2021) (holding that the cost of the Sourcefire manual was not “prohibitive to those interested and of skill in the art”).

96. See Petition for Writ of Certiorari, *supra* note 75, at 14.

97. U.S. Patent No. 9,413,722.

Federal Circuit should have considered these goals of patent law in making its decision in *Centripetal Networks*, rather than simply maintain the status quo of corporate patent dominance.

CONCLUSION

The patent system has several goals, including incentivizing creation and innovation, and promoting public knowledge of new inventions. In exchange for investing time and effort into the creation of new inventions, an inventor is awarded a patent, which grants them a limited monopoly over their invention. Thus, patents can be viewed as a social contract between inventors and the public—the inventor invests in innovation and the public benefits by receiving the knowledge of that invention. That social contract between inventors and the public breaks down when an inventor tries to patent something that is already within the public domain, and such a situation is statutorily barred under the printed publication bar.

The Federal Circuit's holding in *Centripetal Networks I* undermines the patent system's goal of promoting public disclosure of new inventions and innovations by characterizing a \$25,000 password-protected user manual as a printed publication under § 102. The purpose of denying a patent in this case was to prevent the removal of knowledge from the public domain, but the court erred in finding that the information was ever *really* within the public domain to begin with, considering the high price required to access it. Under the Federal Circuit's holding, no one wins—the public may be denied knowledge of future inventions (unless they can pay for it) and future inventors may be denied a patent for their innovations based on publications that are improperly considered publicly available. *Centripetal* said it best in their Petition for Writ of Certiorari—“[t]he United States does not have two separate justice systems—one for the rich and one for the poor.”⁹⁸ By finding the user manual to be publicly available, the Federal Circuit raised the standard for the reasonable diligence required to access a publication to include a person's ability to pay for access. This decision highlights the divide between corporate patent owners and individual inventors, and it further disincentivizes individual inventors and other small businesses from participation in the patent system.

98. Petition for Writ of Certiorari, *supra* note 75, at 1.

** I am incredibly grateful for all the people who have guided and supported me throughout law school and life. I would like to thank the board and staff members of the *North Carolina Law Review*, especially my primary editor Aaron Finkel, for the countless hours spent editing this piece. I would also like to thank Professor Andrew Chin for his guidance and advice on selecting this topic. Lastly, I am so grateful to my friends and family for their support throughout this journey. To my mom, Kathi—thank you for always encouraging me to pursue my dreams and cheering me on every step of the way. To my fiancé, Patrick—I would not be who I am today without your unwavering love and support. And to my dogs, Ellie and Stella—your unconditional love and endless entertainment keep me sane. You deserve all the treats in the world.