GONZAGA LAW REVIEW

Volume 50

2014/15

Number 2

GONZAGA UNIVERSITY
SCHOOL OF LAW
SPOKANE, WASHINGTON 99220-3528

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GONZAGA LAW REVIEW

Volume 50

2014/2015

Number 2

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TIMING MATTERS: PRIOR ART'S AGE INFERS PATENT NONOBVIOUSNESS

Jasper L. Tran*

ABSTRACT

Many assume that prior art does not depreciate, and thus last forever. However, the public knowledge expands rapidly over time. Thus, this assumption can potentially slow innovation rate, because without capping how long prior art last in analyzing patent nonobviousness, ideas for new inventions can eventually run out. Until now, no one has challenged this assumption nor questioned whether a prior art depreciates and/or how long a prior art lasts. Recently, the United States Court of Appeals for the Federal Circuit shed some light into these questions: Leo Pharmaceutical Products, Ltd. v. Rea found that "the elapsed time between the prior art and [Leo's] patent's filing date evinces that [Leo's] invention was not obvious to try."

Nonobviousness is the most difficult requirement for a patent applicant, and the most frequent ground upon which courts invalidate a patent. Courts to date have developed nine non-technical secondary considerations to help fact-finders infer nonobviousness. This paper proposes a tenth secondary consideration: prior art's age. Building on the Leo decision, this paper aims to dispel the myth of measuring a prior art's value and age in the patent nonobviousness context. This paper suggests that old prior art depreciates over time in evaluating a patent's nonobviousness. Specifically, prior art starts depreciating after about 10 years from the date of adding such prior art to the "storehouse of knowledge." This paper then shows how to measure and use prior art's age to infer nonobviousness, applies it to the recent cases and to industries, discusses why using it makes sense, and addresses the possible counterarguments to using it.

Prior art's age directly follows current precedents, and stems from another highly persuasive secondary consideration, long-felt need. It helps fact-finders infer nonobviousness quickly and easily, while still encourages innovation. It will likely not lead to an increased rate of finding patents valid, but actually an increased rate of courts correctly upholding truly nonobvious patents.

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INTRODUCTION

“The difficulty lies, not in the new ideas, but in escaping from the old ones”

—John Maynard Keynes¹

In 1977, 1984, and 1993, Turi, Dikstein, and Serup disclosed ingredients of A, B, and C, respectively.² In 2000, Leo Pharmaceuticals filed for a pharmaceutical composition patent of ingredients A, B, and C to treat a skin condition.³ A third party challenged Leo’s patent for being obvious to an expert to combine Turi, Dikstein, and Serup’s previous contribution to the public knowledge, which would invalidate Leo’s patent.⁴

Tangible property, except land, and some intangible intellectual property⁵ depreciate over time.⁶ Interestingly, many assume that after others have

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1. JOHN MAYNARD KEYNES, *THE GENERAL THEORY OF EMPLOYMENT, INTEREST, AND MONEY* Preface (1936). John Maynard Keynes (June 5, 1883 – Apr. 21, 1946) was a British economist. *See generally* DONALD MOGGRIDGE, *MAYNARD KEYNES: AN ECONOMIST’S BIOGRAPHY* 47 (1995). In 1999, the Time magazine listed Keynes as the 100 most important and influential people of the 20th century, commenting “[h]is radical idea that governments should spend money they don’t have may have saved capitalism.” *See* Robert B. Reich, *The Time 100: John Maynard Keynes*, TIME, Mar. 29, 1999, available at <http://content.time.com/time/magazine/article/0,9171,990614,00.html>.

2. *See* Leo Pharm. Prods., Ltd. v. Rea, 726 F.3d 1346, 1350 (Fed. Cir. 2013). Note that the A, B, and C ingredients denote real chemical ingredients or innovative ideas from the case.

3. *See id.* at 1349; *see also id.* at 1348 (skin condition refers to psoriasis). For more information about psoriasis, *see* NATIONAL PSORIASIS FOUNDATION (2015) <https://www.psoriasis.org/>.

4. *Leo*, 726 F.3d at 1348.

5. *See* 35 U.S.C. § 154 (2012) (“[patent] term beginning on the date on which the patent issues and ending 20 years from the date on which the application for the patent was filed”); 17 U.S.C. §§ 301–303 (2012) (a copyright lasts for the author’s life plus 70 years, or 120 years from the creation date); 15 U.S.C. § 1059 (2012) (a trademark registers can last indefinitely if renewed every 10 years); *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 476, 490–91 (1974) (a trade secret continues indefinitely given no public disclosure). *See generally* *Chicago Lock Co. v. Fanberg*, 676 F.2d 400, 404 (9th Cir. 1982); ROBERT P. MERGES ET AL., *INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE* 59 (1st ed. 1997).

6. *A Brief Overview of Depreciation*, INTERNAL REVENUE SERVICE (Sept. 24, 2014), <http://www.irs.gov/Businesses/Small-Businesses-&-Self-Employed/A-Brief-Overview-of->

disclosed and contributed their ideas to the public knowledge (collectively the “storehouse of knowledge”⁷), such ideas (called “prior art”⁸) do not depreciate, and thus, last forever. However, the “storehouse of knowledge” naturally expands rapidly over time. Thus, this assumption can potentially slow innovation rates,⁹ because without capping how long prior art lasts in analyzing patentability, especially nonobviousness,¹⁰ ideas for new inventions can eventually run out.¹¹ Until now, no one has challenged this assumption nor questioned whether a prior art depreciates and/or how long it lasts.¹² Recently, the United States Court of Appeals for the Federal Circuit (the “Federal Circuit”) shed some light into these questions: *Leo Pharmaceutical Products, Ltd. v. Rea*¹³ found “the elapsed time between the prior art and [Leo’s] patent’s filing date evinces that [Leo’s] invention was not obvious to try.”¹⁴

Depreciation; see also Allen Walburn, *Depreciation of Intangibles: An Area of the Tax Law in Need of Change*, 30 SAN DIEGO L. REV. 453 (1993) (discussing that intangibles depreciate over time in the tax law context).

7. See MATTHEW RIMMER, INTELLECTUAL PROPERTY AND BIOTECHNOLOGY: BIOLOGICAL INVENTIONS 110 (2008).

8. For an in-depth discussion of prior art, see discussion *infra* Part I.A.1.

9. Cf. Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCI. 698, 698–701 (1998) (arguing that more IP rights may lead to fewer useful products for improving human health); *Patent Protection Does Not Contribute to Innovation (in Gene Research)*, UAEM EVIDENCE (Dec. 18, 2013), <https://uaemevidence.wordpress.com/2013/12/18/patent-protection-does-not-contribute-to-innovation-in-gene-research/> (“Although the patent law requirement of disclosure and description of a claimed invention is meant to expand the public storehouse of knowledge and stimulate follow-on research, there is evidence to suggest that patents on genes discourage follow-on research.”).

10. See 35 U.S.C. §§ 101–103, 112 (2012) (patentability requires patent-eligible subject matter in § 101, novelty in § 102, nonobviousness in § 103, and a written description, enablement and best mode in § 112). For an in-depth discussion of nonobviousness, see discussion *infra* Part I.A.

11. See Dean Keith Simonton, Comment, *Scientific Genius Is Extinct*, 493 NATURE 602, 602 (2013) (modern science is just “build[ing] on what is already known rather than alter[ing] the foundation of knowledge”).

12. Note that Professor John F. Duffy has previously proposed a “timing approach” to judge patent obviousness: “changes in technology and market needs are relatively easy to observe, the timing of those changes can provide relatively clear and definite evidence of obviousness.” John F. Duffy, *A Timing Approach to Patentability*, 12 LEWIS & CLARK L. REV. 343, 343 (2008). In contrast, this paper takes a different approach to judge obviousness based on prior art’s age. See discussion *infra* Part II.A.

13. 726 F.3d 1346.

14. *Id.* at 1356.

Patent nonobviousness tests whether an expert, or “person having ordinary skill in the art” (PHOSITA),¹⁵ can reasonably expect to come up with an invention from combining or modifying prior art.¹⁶ However, nonobviousness is the most difficult requirement for a patent applicant,¹⁷ and the most frequent ground upon which courts invalidate a patent.¹⁸ Courts to date have developed nine non-technical “secondary considerations” to help fact-finders infer nonobviousness.¹⁹ For example, one secondary consideration is “long-felt need”²⁰—fact-finders may infer nonobviousness if the solution to a technical

15. See generally *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 265 (1851) (origin of the PHOSITA); Wei-Lin Wang & Jerry I-H Hsiao, *The Person Having Ordinary Skill in the Arts in Assessing Obviousness Standard in the United States and Taiwan after KSR—Implications for Taiwan Patent Law and Practice*, 38 RUTGERS L. REC. 18, 21 (2011); see discussion *infra* Part I.A.; see also *Env'tl. Designs, Ltd. v. Union Oil Co. of California*, 713 F.2d 693, 696 (Fed. Cir. 1983) (outlining the six factors to determine a PHOSITA: “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.”); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 420, 421 (2007) (empowering PHOSITAs with “creativity” and “common sense” to solve the puzzles from multiple prior art pieces).

16. See discussion *infra* Part I.A.

17. Bruce Kramer, *What is Nonobviousness*, 3 MODERN DRUG DISCOVERY 73, 73 (2000) (nonobviousness is “the most difficult hurdle for a patent applicant to overcome”); *Patent Primer*, BIDMIC (2015), <http://tvo.bidmc.org/for-bidmc/invention-disclosure/patent-primer/> (“Despite the possible variety of definitions of novelty and usefulness, the concept of ‘non-obviousness’ is the most complex of these three patentability requirements.”); *Intellectual Property for CS Students: Patents - The Nonobviousness Requirement*, DUKE UNIV. <https://www.cs.duke.edu/courses/cps182s/spring06/cscopyright/Patents/Patent-Nonobviousness.htm> (last visited Mar. 31, 2015) (“While novelty may be the most complex of the basic patent requirements, nonobviousness is the most difficult.”).

18. Robert Smyth, *White Paper Report: United States Patent Invalidity Study at the IPO Annual Meeting* (Sept. 2012), available at <http://www.morganlewis.com/index.cfm/fuseaction/publication.detail/publicationID/484033e0-f895-463e-9fde-c913e33112ce> (obviousness is most frequently the basis for invalidity by the Federal Circuit); Kramer, *supra* note 17, at 73 (“nonobviousness often . . . is the key issue in determining the validity of a patent in litigation”).

19. Andrew Blair-Stanek, *Increased Market Power as a New Secondary Consideration in Patent Law*, 58 AM. U. L. REV. 707, 712–13 (2009); see discussion *infra* part I.A.

20. Note that courts sometimes consider long-felt need separately and sometimes group long-felt need and failure of others as a single secondary consideration, called “long-felt but unsolved need,” or “long-felt but unmet need.” See, e.g., *Nat'l Steel Car, Ltd. v. Can. Pac. Ry.*, 254 F. Supp. 2d 527, 571 (E.D. Pa. 2003) (reviewing independently long-felt need and failure of others), *rev'd*, 357 F.3d 1319 (Fed. Cir. 2004). Compare *Alco Standard Corp. v. TVA*, 808 F.2d 1490, 1498 (Fed. Cir. 1986) (referring to long-felt need separately), with *Finish Eng'g Co. v. Zerpa Indus., Inc.*, 806 F.2d 1041 (Fed. Cir. 1986) (referring to failure of

problem that has gone unsolved for a prolonged period had been obvious to PHOSITAS; otherwise, they would have presumably solved the problem.²¹

This paper proposes a tenth secondary consideration: prior art's age. Building on the *Leo* decision, this paper aims to dispel the myth of measuring a prior art's value and age in the patent nonobviousness context. This paper suggests that older prior art depreciates over time in evaluating a patent's nonobviousness. Specifically, a prior art starts depreciating after about 10 years from the date of adding such prior art to the "storehouse of knowledge."

Prior art's age directly follows current precedents, and stems from another highly persuasive secondary consideration: long-felt need. It helps fact-finders infer nonobviousness quickly and easily, while still encouraging innovation. It will likely not lead to an increased rate of finding patents valid, but actually, an increased rate of courts correctly upholding truly nonobvious patents.

Part I of this article provides background and recent case law on nonobviousness. Part II shows how to measure and use prior art's age to infer nonobviousness, and applies it to recent cases and industries. Part III discusses why using prior art's age to infer nonobviousness makes sense. Part IV addresses the possible counterarguments to using prior art's age.

I. HOW PRIOR ART MATTERS TO NONOBVIOUSNESS

Nonobviousness tests whether a PHOSITA can reasonably expect to come up with an invention from combining or modifying prior art.²² Meanwhile, the Federal Circuit and the Patent Trial and Appeal Board (PTAB) disagree on how the value of old prior art.

A. *Nonobviousness*

The United States patent system aims to promote scientific and technological progress.²³ A patentable invention must be new,²⁴ useful,²⁵ and nonobvious.²⁶ In fact, nonobviousness is the most difficult requirement for a

others separately). This paper refers to this secondary consideration generally as "long-felt need" for consistency.

21. See generally U.S. PAT. & TRADEMARK OFF., MANUAL OF PATENT EXAMINING PROCEDURE § 716.04 (March 2014).

22. See *infra* note 29.

23. U.S. CONST. art. I, § 8, cl. 8 ("To promote the Progress of Science and useful Arts . . .").

24. 35 U.S.C. § 101 (2012).

25. *Id.*

26. 35 U.S.C. § 103 (2012).

patent applicant, and the most frequent ground upon which courts invalidate a patent.²⁷

The nonobviousness requirement entered U.S. law in 1851 through a U.S. Supreme Court decision.²⁸ Congress officially codified nonobviousness in §103 of the Patent Act of 1952,²⁹ which states, even if an invention is new, a patent may not be granted

if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.³⁰

In short, nonobviousness tests whether a PHOSITA can reasonably expect to come up with an invention from combining or modifying prior art.³¹

Nonobviousness is a question of law with underlying factual issues.³² In *Graham v. John Deere Co. of Kansas City*,³³ the U.S. Supreme Court set forth a framework of four factual inquiries to determine nonobviousness: (1) determining “the scope and content of the prior art;” (2) ascertaining the “differences between the prior art and the claims at issue;” (3) resolving “the level of ordinary skill in the pertinent art;” and (4) utilizing certain “secondary considerations.”³⁴ In *KSR International Co. v. Teleflex Inc.*,³⁵ the U.S. Supreme Court loosened the rigid Teaching-Suggestion-Motivation (TSM) test³⁶ and

27. See discussion *supra* Introduction and notes 17–19.

28. See *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 250 (1850).

29. 35 U.S.C. § 103 (2012).

30. *Id.*; see also MICHELE GOODWIN ET AL., *BIOTECHNOLOGY, BIOETHICS & THE LAW* 238 n.5 (2014) (“§ 103 provides that an invention is not patentable unless it is novel and nonobvious.”).

31. The prior art must also “suggest the desirability of making the combination or modification,” and there must be a “reasonable expectation of success.” *Kramer, supra* note 17, at 73–74.

32. *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1349 (Fed. Cir. 2001) (citing *Richardson-Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1479 (Fed. Cir. 1997)).

33. 383 U.S. 1 (1966).

34. *McGinley*, 262 F.3d at 1349 (citing *Graham*, 383 U.S. at 17–18).

35. 550 U.S. 398 (2007).

36. For a discussion of the TSM test, see Nick A. Thornburg, Comment, *The Fate of the Teaching, Suggestion, or Motivation Test After KSR v. Teleflex*, 12 INTELL. PROP. L. BULL. 61, 67 (2007) (“The [TSM] test requires a showing of some teaching, suggestion, or motivation to combine prior art references when an obviousness determination is based on multiple prior art references.”). Note that, at the USPTO, patents examiners utilize the TSM test to establish a *prima facie* case of obviousness to reject a claim invention as obvious. *Kramer, supra* note 17, at 74 (“A *prima facie* case of obviousness is established when three

established a more flexible “obvious to try” standard³⁷ to analyze nonobviousness.

Secondary considerations “focus attention on economic and motivational rather than technical issues and are, therefore, more susceptible of judicial treatment than are the highly technical facts often present in patent litigation.”³⁸ Courts have developed nine non-technical secondary considerations to help infer nonobviousness: “(1) long-felt need; (2) failure of others; (3) commercial success; (4) commercial acquiescence via licensing; (5) professional approval; (6) copying by and praise from infringers; (7) progress through the [Patent and Trademark Office (PTO)]³⁹; (8) near-simultaneous invention; and (9) unexpected results.”⁴⁰

basic criteria have been met. First, there must be some suggestion or motivation, either in the prior art cited by the examiner or in the knowledge generally available to [PHOSITA], to modify the reference or combine the references being relied upon to reject the claimed invention. Second, there must be a reasonable expectation of success. Third, the prior art reference or combination of references must teach or suggest all of the requirements of the claimed invention.”).

37. *KSR Int'l Co.*, 550 U.S. at 421 (“When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103.”).

38. *Graham*, 383 U.S. at 36. For a discussion of secondary considerations’ background, see Blair-Stanek, *supra* note 19, at 711–17. In litigation, the patentee can also use secondary considerations as indirect evidence for patent validity in the preliminary judgment stage. See *Erico Int’l Corp. v. Vutec Corp.*, 516 F.3d 1350, 1357 (Fed. Cir. 2008) (through secondary consideration, “invalidity challenge based on obviousness cast enough doubt on the validity of Claim 17 to negate likelihood of success on the merits as to infringement of a valid patent.”); see also Bryan J. Vogel & Miles A. Finn, *Secondary Considerations of Nonobviousness at the PTAB: Approaches and Obstacles Before the Final Written Decision*, 88 BNA’S PATENT, TRADEMARK & COPYRIGHT J. 1493 (2014) (discussing secondary considerations of nonobviousness in the PTAB litigation).

39. The United States Patent and Trademark Office (“USPTO”) is a federal agency that grants U.S. patents and registers trademarks. See *About Us*, USPTO (Feb. 12, 2015, 11:51AM) <http://www.uspto.gov/about/index.jsp>.

40. See Blair-Stanek, *supra* note 19, at 712–713. Note, that, some courts may have more than nine secondary considerations. For example, Pennsylvania courts use eleven secondary considerations. See, e.g., *Nat’l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd.*, 254 F. Supp. 2d 527, 570 (E.D. Pa. 2003), *rev’d*, 357 F.3d 1319 (Fed. Cir. 2004) (“(1) long-felt but unsolved need; (2) commercial success; (3) failed efforts of others; (4) copying by others; (5) praise for the invention; (7) unexpected results; (8) disbelief of experts; (9) general skepticism of those in the art; (10) commercial acquiescence; and (11) simultaneous development”).

1. Prior Art

Section 102 of the Patent Act⁴¹ defines “prior art” in detail, which includes prior patents, published patent applications, journal articles, and other references upon which a patent examiner can rely.⁴² In essence, a prior art is any reference that is similar or related to the invention.⁴³ Some say, “prior art in the United States [is] everywhere, yet nowhere.”⁴⁴ Indeed, “[t]hey are not organized or concentrated.”⁴⁵ No one disputes that “[s]ubstantially all inventions are for the combination of old [prior art]; what counts is the selection, out of all their possible permutations, of that new combination which will be serviceable.”⁴⁶ A combination of prior art is nonobvious “when the combination requires a greater expenditure of time, effort, or resources than the prior art teachings.”⁴⁷

2. A Secondary Consideration: Long-Felt Need

As mentioned earlier, one of the nine non-technical secondary considerations is “long-felt need.”⁴⁸ Fact-finders may infer nonobviousness if the invention satisfied a long-felt need that was previously unmet.⁴⁹ Long-felt

41. 35 U.S.C. § 102 (2012).

42. Kramer, *supra* note 17, at 73. See generally 35 U.S.C. § 102 (2012).

43. See Gene Quinn, *I Can't Find Prior Art for My Invention*, IPWATCHDOG (Dec. 14, 2013), <http://www.ipwatchdog.com/2013/12/14/prior-art-for-my-invention/id=46793/> (“In a nutshell, the key to understanding prior art is to understand that anything similar or in any way related to what you have created is going to be prior art.”).

44. Charles M. Haynes, *The Patent Situation*, 48 NOTIONS & FANCY GOODS 22, 22 (1914).

45. *Id.*

46. Safety Car Heating & Lighting Co. v. Gen. Elec. Co., 155 F.2d 937, 939 (2d Cir. 1946).

47. Examination Guidelines Update: Developments in the Obviousness Inquiry After KSR v. Teleflex, 75 Fed. Reg. 53643 (Sept. 1, 2010).

48. See discussion *supra* Introduction and Part I.A.

49. See, e.g., United States v. Adams, 383 U.S. 39 (1966); Advanced Display Sys., Inc. v. Kent State Univ., 212 F.3d 1272, 1285 (Fed. Cir. 2000) (“evidence of failed attempts by others could be determinative on the issue of obviousness”); Tec Air, Inc. v. Denso Mfg. Michigan Inc., 192 F.3d 1353 (Fed. Cir. 1999); Litton Systems, Inc. v. Honeywell, Inc., 87 F.3d 1559 (Fed. Cir. 1996); Minnesota Mining and Mfg. Co. v. Johnson & Johnson Orthopedics, Inc., 976 F.2d 1559 (Fed. Cir. 1992); Intel Corp. v. U.S. Int’l. Trade Comm’n, 946 F.2d 821, 835 (Fed. Cir. 1991); Alco Standard Corp. v. Tennessee Valley Auth., 808 F.2d 1490, 1500–01 (Fed. Cir. 1986); Panduit Corp. v. Dennison Mfg. Co., 774 F.2d 1082, 1099 (Fed. Cir. 1985); Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1549 (Fed. Cir. 1983); Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1538–39 (Fed. Cir. 1983); Envtl.

need evidence can be highly persuasive.⁵⁰ This persuasiveness comes from the general presumption that those actually working in a given art can arrive at advances that are obvious.⁵¹ Proof that a problem persisted for a long period could imply that the solution would have already been achieved had it been obvious to PHOSITAS.⁵²

"The more pronounced and persistent the [problem], the stronger the inference of long-felt [need]."⁵³ Conversely, the more recent the problem, the weaker the inference.⁵⁴ Similarly, if an invention uses advanced materials from recent changes in arts, the recent introduction of that advance suggests that the particular problem solved by the invention was not longstanding.⁵⁵

Designs, Ltd. v. Union Oil Co. of California, 713 F.2d 693, 697 (Fed. Cir. 1983); *In re Fielder*, 471 F.2d 640 (C.C.P.A. 1973).

50. See, e.g., *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063 (Fed. Cir. 2012); *Advanced Display Sys.*, 212 F.3d at 1285; *Minnesota Mining and Mfg.*, 976 F.2d at 1559; *Intel Corp.*, 946 F.2d at 835. Indeed, Judge Learned Hand considered "long-felt need" the most useful secondary consideration. See *Safety Car*, 155 F.2d at 939. The U.S. Supreme Court also recognized "long-felt need" as one of three secondary considerations in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966).

51. *Hemodialysis Catheter Patent Litig.*, 831 F. Supp. 1354, 1378 (N.D. Ill. 1993) ("The existence of an enduring, unmet need is strong evidence that the invention is novel, not obvious, and not anticipated. If people are clamoring for a solution, and the best minds do not find it for years, that is practical evidence—the kind that can't be bought from a hired expert, the kind that does not depend on fallible memories or doubtful inferences—of the state of knowledge."); see also Richard L. Robbins, Note, *Subtests of 'Nonobviousness': A Nontechnical Approach to Patent Validity*, 112 U. PA. L. REV. 1169, 1172 (1964) ("Existence of the defect creates a demand for its correction, and it is reasonable to infer that the defect would not persist were the solution obvious.").

52. See *E. J. Brooks Co. v. Stoffel Seals Corp.*, 266 F.2d 841, 842 (2d Cir. 1959) (patentee imprudently asserted in his patent application that "recently . . . there has been a demand").

53. Robbins, *supra* note 51, at 1173.

54. See, e.g., *Ecolchem, Inc. v. S. California Edison Co.*, 227 F.3d 1361, 1376–77 (Fed. Cir. 2000) (recent regulatory change); *Newell Cos., Inc. v. Kenney Mfg. Co.*, 864 F.2d 757, 786–87 (Fed. Cir. 1988).

55. See, e.g., *Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 884 (Fed. Cir. 1998) ("The relevant secondary consideration is 'long-felt but unsolved need,' not long-felt need in isolation. The question, then, is whether . . . evidence of contemporaneous development solved the need."); *Newell Cos.*, 864 F.2d at 768 ("[O]nce another supplied the key element, there was no long-felt need or, indeed, a problem to be solved."); *Graham*, 383 U.S. at 36; see also *Texas Instruments Inc. v. U.S. Int'l. Trade Com'm.*, 988 F.2d 1165, 1178 (Fed. Cir. 1993) (rejecting respondent's argument for no long-felt need when the period between the date of the most pertinent prior art references and the claimed invention is very short).

B. *Recent Case Law on Nonobviousness*

1. *In re Lechene*⁵⁶

In 1960, Lechene appealed from the Patent Trial and Appeal Board's (PTAB)⁵⁷ decision affirming the patent examiner's rejection of Lechene's invention as obvious.⁵⁸ Lechene's invention improved prior art Plumeau et al. from 9 years earlier,⁵⁹ and disclosed a method of "applying fibers to the cores of rotary brushes such as are used in large street-sweeping apparatus, and to a bristle element therefor."⁶⁰ In affirming the PTAB's decision, the Federal Circuit⁶¹ held that:

[T]ime lapses in the evolution of the art, while evidence which should be considered as bearing on the issue of obviousness of an invention, are not conclusive. False [Specifically,] time lapse in the evolution of this art . . . [of] 9 years . . . is of little significance. [F]act that a given improvement appears after a long time lapse does not of itself prove that such change was unobvious.⁶²

2. *Cimline, Inc. v. Crafcro, Inc.*⁶³

In 2011, Cimline sued Crafcro seeking declaratory judgment of invalidity or non-infringement of Crafcro's patent of a sealant melter.⁶⁴ The district court dismissed Cimline's complaint and granted summary judgment favoring Crafcro

56. 277 F.2d 173 (C.C.P.A. 1960).

57. Under the America Invents Act ("AIA"), the Board changed its name from the Board of Patent Appeals and Interferences to the Patent Trial and Appeal Board. Leahy-Smith America Invents Act, Pub. L. No. 112-29 § 7(a)(1), 125 Stat. 284, 313 (2011). The former name of the Board of Appeals was used in this case, but this paper uses the PTAB instead for consistency.

58. *In re Lechene*, 277 F.2d at 175.

59. *Id.* at 175 ("Plumeau et al. [was] issued in 1943 and [Lechene] filed his application in 1952.").

60. *Id.* at 174.

61. The United States Court of Customs and Patent Appeals (1909-82) changed its name to the U.S. Court of Appeals for the Federal Circuit in 1982. See GILES S. RICH, A BRIEF HISTORY OF THE UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS (1980). Although this case uses the former name, this paper uses the Federal Circuit instead for consistency.

62. *In re Lechene*, 277 F.2d at 175; see also *In re McCarn*, 212 F.2d 797, 799 (C.C.P.A. 1954) ("[T]he fact that a given improvement appears after a long period of time has elapsed does not of itself prove that such change was unobvious.").

63. 413 F. App'x 240 (Fed. Cir. 2011).

64. *Id.* at 240.

on its infringement counterclaim.⁶⁵ On appeal, “Cimline argued that [Crafco’s] patent is obvious because it disclose[d] an invention that . . . merely . . . combin[es] . . . prior art sealant melters . . . with powered conveyor belts,” which “were in the prior art since at least the 1980s and for at least seventy-five years.”⁶⁶ Interestingly, during Cimline’s oral argument, Chief Judge Rader questioned Cimline:

If [Crafco’s invention] was so obvious, why wasn’t it done at least 50 years ago, or 20 years ago? . . . Why does it take someone 30 years . . . [or] even 10 years . . . to come up with it? . . . When you throw common sense at me and said it takes 30 years for someone to come up with a common sense, there’s a bit of a disconnect there, I think you need to give me something more?⁶⁷

Ultimately, the Federal Circuit reversed the district court’s grant of summary judgment, and invalidated Crafco’s patent as “a matter of *common sense* to combine a prior art sealant melter with a powered conveyor to create the sealant melter claimed in [Crafco’s] patent.”⁶⁸

3. *Leo Pharmaceutical Products, Ltd. v. Rea*⁶⁹

As mentioned earlier,⁷⁰ in 2013, Leo Pharmaceutical sued its competitor for infringement of its pharmaceutical composition patent for treating the skin condition psoriasis.⁷¹ The competitor then challenged Leo’s patent for being obvious to PHOSITAs by combining the prior art from Turi, Dikstein, and Serup, which were disclosed in 1977, 1984, and 1993, respectively.⁷² Both the USPTO and PTAB⁷³ construed the patent’s claims and invalidated the patent as obvious.⁷⁴

65. *Id.*

66. *Id.* at 244. The exact disclosing date of powered conveyor belts was unknown. *See id.*

67. Oral Argument, *Cimline*, 413 F. App’x 240 (No. 2010–1348), *available at* <http://www.717madisonplace.com/wp-content/uploads/2011/03/2010-1348-excerpt.mp3>.

68. *Cimline*, 413 F. App’x at 247.

69. 726 F.3d 1346 (Fed. Cir. 2013).

70. *See* discussion *supra* Introduction.

71. *Id.* at 1348.

72. *Id.* at 1350.

73. In this case, the Federal Circuit used the prior designation of the Board of Patent Appeals and Interferences for consistency with the decision below. *Leo*, 726 F.3d at 1348 n.1. However, this paper uses the PTAB instead for consistency. *See supra* note 57 and accompanying text.

74. *Leo*, 726 F.3d at 1348.

On appeal before Chief Judge Rader, and Judges O'Malley and Reyna,⁷⁵ the Federal Circuit reversed the PTAB's holding and found that the invention was not obvious to PHOSITAS, because secondary considerations⁷⁶ weigh against an obviousness finding.⁷⁷ In addition to "unexpected results,"⁷⁸ and Leo's "commercial success,"⁷⁹ the Federal Circuit analyzed long-felt need⁸⁰ and found that "twenty-two years after Turi and fourteen years after Dikstein . . . [t]he intervening time between the prior art's teaching of the components and the eventual preparation of a successful composition *speaks volumes* to the nonobviousness of [Leo's] patent."⁸¹ The Federal Circuit then applied the "obvious to try" standard and held:

The elapsed time between the prior art and [Leo's] patent's filing date evinces that [Leo's] patent's claimed invention was not obvious to try. Indeed this considerable time lapse suggests instead that the Board only traverses the obstacles to this inventive enterprise with a resort to hindsight. It took over a decade . . . for [prior art] Dikstein's formulations to be tested for storage stability. And, until the advancement made by the inventors of [Leo's] patent, no one had proposed a new formulation that would be storage stable. The problem was not known, the possible approaches to solving the problem were not known or finite, and the solution was not predictable. Therefore, the claimed invention would not have been obvious to try to one of ordinary skill in the art. Indeed ordinary artisans would not have thought to try at all because they would not have recognized the problem.⁸²

75. Chief Judge Rader wrote for a unanimous court. *See id.*

76. In this case, the Federal Circuit actually referred to the secondary considerations as "objective indicia of nonobviousness." *Id.*

77. *Id.*

78. *Id.* at 1358.

79. *Id.* The court also considered the Food and Drug Administration approval of Leo's drug as relevant in evaluating the nonobviousness secondary considerations. *Id.*

80. *Id.* at 1359. *See generally* discussion *supra* Part I.A.2 (discussing long-felt need). Here, the "evidence of the long felt but unresolved need" was the need for a single formulation to treat psoriasis. *Leo*, 726 F.3d at 1359.

81. *Id.* (emphasis added).

82. *Id.* at 1356–57. Note that this block quote did not appear under the nonobviousness secondary considerations analysis, but under the "obvious to try" standard analysis. *Id.*

The Federal Circuit concluded that together, the secondary considerations were the most “probative evidence of nonobviousness . . . enabl[ing] the court to avert the trap of hindsight,” which the PTAB fell for.⁸³

4. *Ex parte Nandu Deorkar, Robert C. Buss, Joseph M. Mladovich, & Paul A. Bouis*⁸⁴

Three months after *Leo*,⁸⁵ the inventors-appellants of a 2005 patent application⁸⁶ relied on *Leo* to request a rehearing for its prior appeal to the PTAB,⁸⁷ which sustained the patent examiner’s rejection of the inventors-appellants’ claims as obvious⁸⁸ based on two pieces of prior art from 2002⁸⁹ and 2004.⁹⁰ In granting the rehearing but denying to make any changes therein, the PTAB narrowly interpreted *Leo*—the *Leo* situation requires both long-felt need and “divergent teachings and express disclaimer in the applied prior art that would have precluded one of ordinary skill in the art from arriving at such combination.”⁹¹

83. *Id.* at 1359 (citing *Crocs, Inc. v. Int’l Trade Comm’n*, 598 F.3d 1294, 1310 (Fed. Cir. 2010)).

84. No. 2012-006357, 2013 WL 6217838 (P.T.A.B. Nov. 27, 2013).

85. See discussion *supra* Part I.B.2.

86. U.S. Patent Application No. 11/813434, Publ’n No. 20080203029 (filed Dec. 16, 2005) (Deorkar et al., applicants).

87. *Ex parte Nandu Deorkar, Robert C. Buss, Joseph M. Mladovich, & Paul A. Bouis*, No. 2012-006357, 2013 WL 4636999 (P.T.A.B. Aug. 29, 2013).

88. *Deorkar*, 2013 WL 6217838, at *1.

89. U.S. Patent Application No. 10/051195, Publ’n No. 20020134729 (filed Jan. 22, 2002) (Muranaka et al., applicants).

90. U.S. Patent No. 6,689,820 (filed Jan. 22, 2002) (issued Feb. 10, 2004).

91. *Deorkar*, 2013 WL 6217838, at *2 (“[T]he Federal Circuit limited *Leo Pharm. Prods., Ltd.* to a situation where the applied prior art did not provide any apparent reason for one of ordinary skill in the art to arrive at the claimed subject matter not only due to the failure of the applied prior art to recognize and address the problem found by Appellants, but also due to the divergent teachings and express disclaimer in the applied prior art that would have precluded one of ordinary skill in the art from arriving at such combination.”). The PTAB cited to *KSR* for support. *Id.* (quoting *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007)) (“The first error of the [Federal Circuit] in this case was to foreclose this reasoning by holding that courts and patent examiners should look only to the problem the patentee was trying to solve . . . The [Federal Circuit] failed to recognize that the problem motivating the patentee may be only one of many addressed by the patent’s subject matter. The question is not whether the combination was obvious to the patentee but whether the combination was obvious to a person with ordinary skill in the art. Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.”).

II. A NEW SECONDARY CONSIDERATION: PRIOR ART'S AGE

Therefore, a new secondary consideration should be included to infer nonobviousness: prior art's age. To quickly recap: Section A of this article outlined how to measure and use prior art's age to infer nonobviousness; and Section B applied prior art's age to recent cases as well as pharmaceutical, biotechnology and other industries. Let us now consider the proposed new secondary consideration.

A. *Measuring and Using Prior Art's Age to Infer Nonobviousness*

Although the *Lechene* precedent⁹² has never been officially overruled, more than fifty years later in *Cimline*⁹³ and *Leo*,⁹⁴ the Federal Circuit seems to have shifted its view on old prior art.⁹⁵ Chief Judge Rader's questions in *Cimline*'s oral argument⁹⁶ and the Federal Circuit's reasoning in *Leo*⁹⁷ seemingly suggest that an old prior art depreciates over time in evaluating a patent's nonobviousness.⁹⁸ Interestingly, in *Leo*, this conclusion was not part of

92. See discussion *supra* Part I.B.1 and note 62.

93. See discussion *supra* Part I.B.2.

94. See discussion *supra* Part I.B.3.

95. Compare *In re Lechene*, 277 F.2d 173, 175 (C.C.P.A. 1960) (time lapse alone does not prove nonobviousness of an improvement patent), with *Leo Pharm. Products, Ltd. v. Rea*, 726 F.3d 1346, 1356 (Fed. Cir. 2013) (“[E]lapsed time . . . evinces that [Leo’s] patent’s claimed invention was not obvious to try.”). See also discussion *supra* Parts I.B.1, I.B.3.

96. See Oral Argument, *supra* note 67 (“Why does it take someone 30 years . . . [or] even 10 years . . . to come up with it?”); see also discussion *supra* Part I.B.2.

97. *Leo*, 726 F.3d at 1356 (“[E]lapsed time between the prior art and [Leo’s] patent’s filing date evinces that [Leo’s] patent’s claimed invention was not obvious to try.”); see discussion *supra* Part I.B.3.

98. See, e.g., Dennis Crouch, *Judge Rader’s Obviousness Tutorial: Including the Conclusion that Older Prior Art is Less Credible and a Restatement that Objective Indicia of Nonobviousness Play a Critical Role*, PATENTLYO (Aug. 28, 2013), <http://patentlyo.com/patent/2013/08/judge-raders-obviousness-tutorial-including-the-conclusion-that-older-prior-art-is-less-credible-and-a-restatement-that-o.html> (“[O]lder prior art should be seen as less credible in the obviousness analysis”); *Old Prior Art and Obviousness*, 717 MADISON PLACE (Aug. 28, 2013, 9:57 PM), <http://www.717madisonplace.com/?p=6185> (“[I]f shortness in time between inventive activity is relevant to show obviousness, then a substantial length of time between inventive activity—particularly when common sense is alleged—is relevant to argue against obviousness.”); Carlson Caspers, *Does Prior Art Lose Significance with Time?*, ANDA ADVISORS: PARAGRAPH IV LITIG. BLOG (Oct. 3, 2013), <http://andaadvisors.com/does-prior-art-lose-significance-with-time/> (“[A] significant lapse in time between the patent at issue and what should be a relevant piece of prior art for obviousness determinations dulls the significance of that prior art.”).

the court's analysis of nonobviousness secondary considerations;⁹⁹ thus it may now be relevant to establishing a *prima facie* case of obviousness.¹⁰⁰ Additionally, this conclusion could be the tenth secondary consideration to infer nonobviousness, providing additional evidence for long-felt need existence.¹⁰¹ Regardless, this conclusion rebuts the assumption that prior art lasts forever.

The exact time of how long a prior art's value lasts is difficult to determine. However, Chief Judge Rader seems to hint at this question's answer in his questions during *Cimline's* oral argument¹⁰²: "Why does it take someone 30 years . . . [or] even 10 years . . . to come up with it?"¹⁰³ The *Lechene* decision held that "time lapse . . . of 9 years . . . is of little significance" to the nonobvious analysis.¹⁰⁴ Furthermore, *Leo's* invention came from prior art that was six, 16 and 23 years old¹⁰⁵—a combination of at least two pieces of prior art would mark the time of *Leo's* invention at least 16 years out. Conclusively, a prior art starts depreciating after about 10 years.¹⁰⁶ Of course, future case law will provide more guidance to determine the exact cutoff of when a prior art completely loses its value.

The older the prior art, the more prior art's age helps infer nonobviousness. Prior art's age offers little help when dealing with recent prior art of 9 years old or less.¹⁰⁷ The date that starts the clock of prior art's age is the date of adding the prior art to the "storehouse of knowledge." For patents, this starting date is the filing date.¹⁰⁸ For other scholarships, the starting date is the date of disclosure or publication.¹⁰⁹

99. See *supra* note 82 and accompanying text.

100. See Carlson Caspers, *supra* note 98. See also MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 21, at §§ 2142–2143; Kramer, *supra* note 17 (discussing a *prima facie* case of obviousness).

101. See Carlson Caspers, *supra* note 98 (the old prior art analysis "sounds a lot like a long-felt, unmet need argument").

102. See discussion *supra* Part I.B.2.

103. Oral Argument, *supra* note 67.

104. See discussion *supra* Part I.B.1.

105. See *Leo Pharm. Products, Ltd. v. Rea*, 726 F.3d 1346, 1350 (Fed. Cir. 2013) (*Leo* filed his patent application in 2000 and combined the prior art Turi, Dikstein, and Serup, which were disclosed in 1977, 1984, and 1994, respectively).

106. Interestingly, the *Lechene* decision and Chief Judge Rader's questions during *Cimline's* oral argument show that the threshold for prior art's age is about 10 years. See *In re Lechene*, 277 F.2d 173, 175 (C.C.P.A. 1960); Oral Argument, *supra* note 67.

107. This assumes the *Lechene* precedent is still good law. *In re Lechene*, 277 F.2d at 175 ("time lapse . . . of 9 years . . . is of little significance" to the nonobvious analysis); see discussion *supra* Part I.B.1.

108. See *Leo*, 726 F.3d at 1356 ("[T]he elapsed time between the prior art and [*Leo's*] patent's filing date evinces that [*Leo's*] invention was not obvious to try.") (emphasis

At the moment, fact-finders could apply prior art's age in conjunction to the other nine secondary considerations¹¹⁰ to infer nonobviousness. Because the analysis came from the recent Federal Circuit's *Leo* decision,¹¹¹ the prior art's age analysis is not dispositive in inferring nonobviousness—it may be too early to apply prior art's age alone to dispose the case until more of *Leo*'s progeny¹¹² surfaces. More secondary considerations analysis would only help. Alternatively, prior art's age offers a quick and easy way to infer nonobviousness.¹¹³ Fact-finders could simply apply prior art's age first, or even by itself. In other words, prior art's age could either be *the* secondary consideration or *a* secondary consideration to infer nonobviousness.

B. *Applying Prior Art's Age*

1. To Recent Cases

Because prior art's age was drawn from *Leo*,¹¹⁴ this paper will not apply prior art's age to *Leo*. However, let's apply prior art's age to previously mentioned cases—*Lechene*,¹¹⁵ *Cimline*¹¹⁶ and *Deorkar*¹¹⁷—to demonstrate its application.

added). A patent's filing date starts its term. 35 U.S.C. § 154 (2012) (“[Patent] term beginning on the date on which the patent issues and ending 20 years from the date on which the application for the patent was filed”).

109. See *The Changing Boundaries of Prior Art Under the AIA: What Your Company Needs to Know*, COOLEY LLP: CLIENTS ALERTS (Feb. 21, 2013), <http://www.cooley.com/changing-boundaries-of-prior-art-under-AIA-what-your-company-needs-to-know>. See generally 35 U.S.C. § 102 (2012).

110. See discussion *supra* Part I.A.

111. See discussion *supra* Part I.B.3.

112. *Leo*'s progeny is the line of cases citing to *Leo*, which, as of April 2015, included ten reported and seven unreported cases.

113. See discussion *infra* Part III.C.

114. See discussion *supra* Parts I.B.3 & II.A.

115. See discussion *supra* Part I.B.1.

116. See discussion *supra* Part I.B.2.

117. See discussion *supra* Part I.B.4.

- a) A Clear and Obvious Case: Ex parte *Nandu Deorkar*, *Robert C. Buss*, *Joseph M. Mladovich*, & *Paul A. Bouis*¹¹⁸

Recall that the inventors-appellants' 2005 patent application combined two pieces of prior art from 2002 and 2004.¹¹⁹ The PTAB sustained the patent examiner's rejection of the inventors-appellants' claims as obvious.¹²⁰ If one considers prior art's age, the inventors-appellants' invention combined two pieces of prior art that were one and three years old. Since the prior art was relatively new and much less than the about-10-year threshold of prior art's age, their presence in the "storehouse of knowledge" has significant value to the nonobviousness analysis. In applying prior art's age alone, the inventors-appellants' invention would have been very obvious to a PHOSITA.

- b) A Clear Nonobvious Case: *Cimline, Inc. v. Crafcro, Inc.*¹²¹

As discussed earlier, Crafcro's invention combined sealant melters and powered conveyor belts—both were in the prior art since at least the 1980s and for at least 75 years.¹²² The Federal Circuit ultimately invalidated Crafcro's patent using "common sense."¹²³ If a court were to consider prior art's age, the prior art of sealant melters and powered conveyor belts would be at least 20 to 75 years old. Because the prior art was much older than the about-10-year threshold of prior art's age, their presence in the "storehouse of knowledge" has little value to the nonobviousness analysis. In applying prior art's age alone, Crafcro's invention would have been nonobvious to a PHOSITA.

Additionally, in using common sense to invalidate a patent, the Federal Circuit left a broad and ambiguous precedent to multiple interpretations.¹²⁴ How does a "common sense" analysis work, and whose common sense

118. No. 2012-006357, 2013 WL 6217838 (P.T.A.B. Nov. 27, 2013); see discussion *supra* Part I.B.4.

119. *Id.* See U.S. Patent Application No. 11/813434, Publ'n No. 20080203029 (published Dec. 15, 2005) (Deorkar et al., applicants); U.S. Patent Application No. 10/051195, Publ'n No. 20020134729 (published Sept. 26, 2002) (Muranaka et al., applicants); U.S. Patent No. 6,689,820 (issued Feb. 10, 2004).

120. *Deorkar*, 2013 WL 6217838, at *1.

121. 413 F. App'x 240 (Fed. Cir. 2011); see discussion *supra* Part I.B.2.

122. *Cimline*, 413 F. App'x at 244.

123. *Id.* at 247.

124. However, this is not the first time the Federal Circuit uses "common sense" to invalidate a patent as obvious. See, e.g., *Perfect Web Technologies, Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1328–31 (Fed. Cir. 2009) (holding that "common sense" suffices to invalidate claims as obvious on summary judgment).

matters?¹²⁵ Analyzing using prior art's age would have left a more conclusive precedent.

c) A Close Call: In re *Lechene*¹²⁶

Recall that Lechene's invention improved prior art Plumeau et al. from 9 years earlier.¹²⁷ The Federal Circuit held that a 9-year time lapse holds "little significance" to infer nonobviousness.¹²⁸ In applying prior art's age, the Federal Circuit correctly decided *Lechene*. The threshold for prior art's age is about 10 years.¹²⁹ Because prior art Plumeau et al. was 9 years old at the time of Lechene's invention, prior art's age offers little help to the nonobviousness analysis. Maybe if Lechene's invention had been filed a few years later, prior art's age would have helped reduce prior art Plumeau et al.'s value and significance to infer nonobviousness. This was a close call, and as such, fact-finders should employ the other nine secondary considerations to help infer nonobviousness.

2 To Industries

a) Pharmaceutical and Biotechnology

Because *Leo* dealt with a pharmaceutical composition patent,¹³⁰ the *Leo* decision definitely holds precedential value on pharmaceutical cases.¹³¹ This could also extend broadly to biotechnological cases at large, because courts often rely heavily on biotechnological precedents to deal with bioethics

125. *But see id.*

126. 277 F.2d 173 (C.C.P.A. 1960); *see discussion supra* Part I.B.1.

127. *In re Lechene*, 277 F.2d at 175.

128. *Id.*

129. *See discussion supra* Part II.A.

130. *See discussion supra* Part I.B.3.

131. The Federal Circuit decisions hold precedential value to the lower courts and the PTAB through the *stare decisis* doctrine. *See* David L. McCombs et al., *Federal Circuit Appeals From the PTAB: A New Game or Just the Same Old Practice?*, HAYNES BOONE (Mar. 22, 2013), <https://www.haynesboone.com/federal-circuit-appeals-from-the-ptab-a-new-game-or-just-the-same-old-practice-02-07-2013/> (discussing the precedential effects of Federal Circuit decisions). For a discussion on the *stare decisis* doctrine, *see* Henry Paul Monaghan, *Stare Decisis and Constitutional Adjudication*, 88 COLUM. L. REV. 723, 739–67 (1988) (discussing *stare decisis*' content, justification, strengths, and weaknesses).

issues.¹³² Prior art's age came directly from *Leo*,¹³³ so, prior art's age directly applies to pharmaceutical and biotechnology.

This is good news for pharmaceutical companies. Obviously, prior art's age does not imply that prior art just expires after roughly 10 years;¹³⁴ thus, generic drug makers will not simply profit. Because prior art's age only applies to infer nonobviousness, drug makers may worry about one less ground for the courts to invalidate their drug patents, especially when this ground is the most frequent ground for patent invalidity.¹³⁵

b) Other Industries

However, in *Leo*, the Federal Circuit did not explicitly limit its old prior art analysis to only pharmaceutical or biotechnological cases.¹³⁶ A limited reading of *Leo* to only apply to pharmaceutical and/or biotechnology would severely restrict *Leo*'s precedential value.¹³⁷ Therefore, until told otherwise, the *Leo* decision should be read as broad as possible to serve as a precedent for courts to follow, as long as such reading does not violate the Constitution.¹³⁸

Assuming *Leo* applies broadly to other industries besides pharmaceutical and biotechnology, this would mean good news for other industries as well. For example, in the software industry, the "Dot-com bubble" caused an explosion in writing software, especially websites.¹³⁹ However, the Dot-com bubble occurred in 1997–2000 and peaked in 2000.¹⁴⁰ So, it has been 14 to 17 years

132. See George P. Smith, II, *Judicial Decisionmaking in the Age of Biotechnology*, 13 NOTRE DAME J.L. ETHICS & PUB. POL'Y 93 (1999); cf. Michele Goodwin, *A Return To Judging: Genetics and Biotechnologies in the Courts*, 23 GENWATCH 28, 28–29 (2010) ("[T]he challenge for the contemporary bench is determining the proper application of law and legal concepts to sexy new technologies and biotechnologies . . . contemporary conflicts in biotechnology mimic their predecessors and will require an engaged, courageous, equipped judiciary.").

133. See discussion *supra* Part II.A and *infra* Part III.A.

134. See discussion *supra* Part II.A.

135. See discussion *supra* Part I.A.1 and notes 17–19.

136. See *Leo Pharm. Products, Ltd. v. Rea*, 726 F.3d 1346 (Fed. Cir. 2013).

137. See discussion *supra* Part II.B.2.a and note 131; but see discussion *infra* Part IV.A.

138. See Orin S. Kerr, *How to Read a Judicial Opinion: A Guide for New Law Students*, 11 GREEN BAG 2D 51, 51–58 (2007).

139. See Jesse Colombo, *The Dot-Com Bubble*, THE BUBBLE BUBBLE (Aug. 19, 2012), <http://www.thebubblebubble.com/dot-com-bubble/>.

140. *Dot-Com Bubble Burst*, DESIGN HIST. TIMELINE, <http://designtimeline.cias.rit.edu/why/dot-com-bubble-burst/> (last visited Apr. 1, 2015); see also Kalen Smith, *History of the Dot-Com Bubble Burst and How to Avoid Another*, MONEY CRASHERS, <http://www.moneycrashers.com/dot-com-bubble-burst/> (last visited Mar. 31, 2015).

since the Dot-com bubble period. Because the software written in the Dot-com bubble period probably passes the about-10-year threshold,¹⁴¹ it would most likely have less value to analyze software patents' nonobviousness.

III. WHY USING PRIOR ART'S AGE TO INFER NONOBVIOUSNESS MAKES SENSE

A. Drawn From Current Precedents

Prior art's age directly follows current precedents,¹⁴² and so, it would be easy for courts to adopt. Because the Federal Circuit decided *Leo* fairly recently,¹⁴³ only time will tell how courts will treat the *Leo* decision. Regardless, here and now, the *Leo* decision serves as precedent to courts and the PTAB.¹⁴⁴ To reconcile the 55-year-old *Lechene* case with the recent *Leo* decision, the *Lechene* patent improved one prior art,¹⁴⁵ while the *Leo* patent combined various pieces of prior art to make a new invention.¹⁴⁶ Not only has the *Lechene* precedent¹⁴⁷ not been overruled, the Federal Circuit still cites to *Lechene*.¹⁴⁸ Because the *Lechene* precedent is still presumably good law, courts and parties alike should be more careful applying prior art's age to cases involving improvement patents.

However, because the judges sitting on the Federal Circuit have changed since the *Lechene* decision,¹⁴⁹ the new judges may not share the same views on the same subject matter as the former judges.¹⁵⁰ It is important to note that this proposal could be of Chief Judge Rader's making alone. After all, it was Chief Judge Rader who questioned *Cimline*'s oral argument,¹⁵¹ and wrote for the unanimous opinion in *Leo*, though presumably approved by Judges O'Malley

141. Like applying prior art's age to *In re Lechene*, 277 F.2d 173 (C.C.P.A. 1960), this is another close call that employing the other secondary considerations would only help infer nonobviousness. See discussion *supra* Part II.B.1.c.

142. See discussion *supra* Part II.A.

143. See *Leo Pharm. Products, Ltd. v. Rea*, 726 F.3d 1346 (Fed. Cir. 2013).

144. See *supra* note 131 and accompanying text.

145. *Lechene*, 277 F.2d at 175.

146. *Leo*, 726 F.3d at 1348-49.

147. See discussion *supra* Part I.B.1.

148. See *Heidelberg Harris, Inc. v. Mitsubishi Heavy Indus., Ltd.*, 243 F.3d 560, 565 (Fed. Cir. 2000) (unreported); *In re Weber*, 312 F.2d 810, 813 (C.C.P.A. 1963).

149. Compare *In re Lechene*, 277 F.2d at 174 (appearing before Chief Judge Worley, Judges Rich, Martin, Smith and Kirkpatrick—who substituted for Judge O'Connell), with *Leo*, 726 F.3d at 1348 (appearing before Chief Judge Rader, Judges O'Malley and Reyna).

150. Although rare, this is how the same court overrules cases. See *supra* note 131 and accompanying text.

151. See discussion *supra* Part I.B.2.

and Reyna also.¹⁵² It may be too early to say that the entire Federal Circuit shares this view, although Judges O'Malley and Reyna apparently agree with Chief Judge Rader.¹⁵³

B. *Stemmed From Another Highly Persuasive Secondary Consideration:
Long-Felt Need*

Judges have found long-felt need evidence highly persuasive to infer nonobviousness.¹⁵⁴ Satisfying a long-felt need also strongly supports and justifies patentability under two classical economic justifications for patent law.¹⁵⁵

At first glance, prior art's age may come across as the same as long-felt need.¹⁵⁶ However, long-felt need requires a problem.¹⁵⁷ Unlike long-felt need, prior art's age does not require a problem, and only inquires into how long ago others added prior art to the "storehouse of knowledge."¹⁵⁸ In a sense, prior art's age analysis is broader than long-felt need analysis.¹⁵⁹ Consequently, the broader scope of prior art's age shows that a long-felt need finding supports a nonobviousness conclusion from analyzing prior art's age. Inversely, a

152. See discussion *supra* Part I.B.3 and note 75.

153. *Id.*

154. See discussion *supra* Part I.A.2 and note 50.

155. Blair-Stanek, *supra* note 19, at 730–31 & n.136 ("The patent-induced theory would support long-felt need, as its existence would induce the search for an invention satisfying the need. The rewards theory also would, under the theory that in satisfying the need the patentee has contributed something of value to society. . . . The other three non-classical theories of the patent system seem indifferent to long-felt need."). See generally A. Samuel Oddi, *Un-Unified Economic Theories of Patents—The Not-Quite-Holy Grail*, 71 NOTRE DAME L. REV. 267, 273–86 (1996) (discussing five economic theories for the patent system).

156. Carlson Caspers, *supra* note 98 (the old prior art analysis "sounds a lot like a long-felt, unmet need argument"); see *Won-Door Corp. v. Cornell Iron Works, Inc.*, No. 2:13-CV-331-TS, 2013 WL 5503188, at *4, n.28 (D. Utah Oct. 3, 2013) (analyzing "the length of the intervening time between the publication dates of the prior art and the claimed invention" as long-felt need) (quoting *Leo Pharm. Products, Ltd. v. Rea*, 726 F.3d 1346, 1358–59 (Fed. Cir. 2013)).

157. See discussion *supra* Part I.A.2 and notes 49, 52.

158. See discussion *supra* Part II.A.

159. Note that this paper does not propose getting rid of the long-felt need analysis because an analysis of the prior art's age has a broader scope. This paper simply suggests adding prior art's age as another secondary consideration to help fact-finders infer obviousness.

nonobviousness finding by analyzing prior art's age helps reinforce a long-felt need evidence.¹⁶⁰

C. *A Quick and Easy Way to Infer Nonobviousness*

Fact-finders may feel overwhelmed when they use a nine-factor test to infer nonobviousness.¹⁶¹ Prior art's age offers a quick and easy way to infer nonobviousness from written documents, because written documents can quickly provide when others added such prior art to the "storehouse of knowledge."¹⁶²

Often, if fact-finders can easily infer nonobviousness from long-felt need, they do not need to further analyze prior art's age (though it does help). But, although long-felt need is currently highly persuasive,¹⁶³ it requires evidence or testimonies from PHOSITAS or experts to show a long-felt but previously unmet problem.¹⁶⁴ Thus, prior art's age is a quicker and easier way to infer nonobviousness than long-felt need.¹⁶⁵

D. *Encouraging Innovation*

The "storehouse of knowledge" has been expanding rapidly,¹⁶⁶ which can potentially slow innovation rate.¹⁶⁷ Without capping how long a prior art lasts in analyzing patent nonobviousness, ideas for new inventions can eventually run out.¹⁶⁸ Consequently, society suffers: fewer nonobviousness findings lead

160. See Carlson Caspers, *supra* note 98 (the old prior art analysis "sounds a lot like a long-felt, unmet need argument").

161. See discussion *supra* Part I.A.

162. This assumes the written documents provide the date that others added the prior art to the "storehouse of knowledge." As technology advances, record-keeping has become easier because everything is now electronically record-kept. Cf. Cynthia Sturm, *Record Keeping for Practitioners*, 43 CE CORNER 70, 70-75 (2012) (encouraging paper and electronic record-keeping).

163. See discussion *supra* Part I.A.2 and note 50.

164. See Joseph Scott Miller, *Level of Skill and Long-Felt Need: Notes on A Forgotten Future*, 12 LEWIS & CLARK L. REV. 579 (2008).

165. See discussion *supra* Part I.A.2.

166. See *supra* note 162.

167. Cf. Heller & Eisenberg, *supra* note 9 (arguing that more IP rights may lead to fewer useful products for improving human health); UAEM EVIDENCE, *supra* note 9 ("Although the patent law requirement of disclosure and description of a claimed invention is meant to expand the public storehouse of knowledge and stimulate follow-on research, there is evidence to suggest that patents on genes discourage follow-on research.").

168. See Simonton, *supra* note 11 (modern science is just "build[ing] on what is already known rather than alter[ing] the foundation of knowledge").

to fewer patents granted, which means less incentive for innovation and could lead to fewer inventions.¹⁶⁹ Conversely, more obviousness finding could lead to more patents granted, which means more incentive for innovation and could lead to more inventions.¹⁷⁰

Some may claim that prior art's age may actually discourage innovation: because a patent lasts for 20 years¹⁷¹ and prior art's age suggests its nonobviousness' value only for about 10 years, and seems to expire at some point,¹⁷² can an inventor simply reapply to renew his patent or tweak it a bit after his 20-year market monopoly? In other words, a patent may be able to be continuously recycled to last forever. However, this is unlikely, because that is not what prior art's age stands for—it only applies to patent nonobviousness, not patents overall.¹⁷³ The other patentability requirements still serve as gatekeepers as to whether the USPTO grants a new patent.¹⁷⁴ Prior art's age simply serves as a quick and easy inference¹⁷⁵ for the difficult-to-understand nonobviousness to fact-finders.¹⁷⁶

169. See generally Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 275–80 (1977) (discussing that the primary purposes of the intellectual property system encouraging innovation and incentivizing inventors).

170. The opposite could be also true—more patents could deter innovation. See Heller & Eisenberg, *supra* note 9 (arguing that more IP rights may lead to fewer useful products for improving human health). For example, the war against non-practicing entities, also known as “patent trolls,” has greatly deterred innovation by causing industries to devote their efforts to defending patent trolls’ lawsuits instead of innovating. See Robert P. Merges, *The Trouble with Trolls: Innovation, Rent-Seeking and Patent Law Reform*, 24 BERKELEY TECH. L.J. 1583, 1586–91 (2009); Gerald N. Magliocca, *Blackberries and Barnyards: Patent Trolls and the Perils of Innovation*, 82 NOTRE DAME L. REV. 1809, 1809–37 (2007).

171. See 35 U.S.C. § 154 (2012) (“[Patent] term beginning on the date on which the patent issues and ending 20 years from the date on which the application for the patent was filed”).

172. See discussion *supra* Part II.A.

173. See discussion *supra* Parts I.A. & II.A.

174. Besides nonobviousness in § 103, the Patent Act also requires patent-eligible subject matter in § 101, novelty in § 102, written description, enablement and best mode in § 112. See generally 35 U.S.C. §§ 101–103, 112 (2012).

175. See discussion *supra* Part III.C.

176. See discussion *supra* Part I.A.

IV. COUNTERARGUMENTS TO USING PRIOR ART'S AGE

A. *Leo Should Be Narrowly Interpreted*

In *Deorkar*,¹⁷⁷ the PTAB narrowly interpreted the Federal Circuit's *Leo* decision.¹⁷⁸ However, a PTAB decision only serves as precedent in the USPTO's appeal system, and not in the common law system under the *stare decisis* doctrine.¹⁷⁹ Therefore, the *Deorkar* decision only applies to the patent examiners and litigators before the USPTO. Because a PTAB decision does not hold much precedential value, it is too early to decide whether the PTAB correctly interpreted the Federal Circuit's *Leo* decision; only time will tell.

Even if the PTAB correctly interpreted *Leo*—that the *Leo* situation requires both long-felt need and “divergent teachings and express disclaimer in the applied prior art that would have precluded one of ordinary skill in the art from arriving at such combination”¹⁸⁰—this narrow interpretation would severely limit *Leo* as a precedent.¹⁸¹ Furthermore, most scientific discoveries often incorrectly conclude how they apply to the current technologies and resulted in “divergent teachings.”¹⁸² Therefore, the PTAB's second requirement of “divergent teachings and express disclaimer in the applied prior art that would have precluded PHOSITA from arriving at such combination” would be hardly visible until at least decades later.

Others may claim that because *Leo* involved a pharmaceutical composition patent that combined several pieces of prior art,¹⁸³ *Leo* should be applied narrowly to only cases involving pharmaceutical patents, or cases involving patents combining several pieces of prior art (instead of improvement patents¹⁸⁴). As addressed earlier,¹⁸⁵ nowhere in the *Leo* decision did the Federal

177. See discussion *supra* Part I.B.4.

178. *Ex parte* Nandu Deorkar, Robert C. Buss, Joseph M. Mladovich, & Paul A. Bouis, No. 2012-006357, 2013 WL 6217838 at *2 (P.T.A.B. Nov. 27, 2013) (discussing that the *Leo* situation requires both long-felt need and “divergent teachings and express disclaimer in the applied prior art that would have precluded one of ordinary skill in the art from arriving at such combination.”).

179. See *supra* note 131 and accompanying text.

180. *Deorkar*, 2013 WL 6217838, at *2.

181. But see discussion *supra* Part II.B.2.b and note 131.

182. In fact, the “scientific method” taught us to hypothesize and test our own hypotheses through experiments. HOWARD PITLER ET AL., *Generating and Testing Hypotheses*, in USING TECHNOLOGY WITH CLASSROOM INSTRUCTION THAT WORKS 111, 111–21 (2d ed. 2012).

183. *Leo Pharm. Products, Ltd. v. Rea*, 726 F.3d 1346, 1348 (Fed. Cir. 2013); see discussion *supra* Part II.B.2.b.

184. See *infra* note 189 and accompanying text.

Circuit say in dicta to narrowly apply *Leo* for future cases.¹⁸⁶ Until the Federal Circuit says otherwise, the *Leo* decision should be interpreted as broad as possible to hold precedential value.¹⁸⁷

Because the *Lechene* decision¹⁸⁸ has never been officially overruled and the Federal Circuit still cites to *Lechene*,¹⁸⁹ a case dealing with an improvement patent based on only one prior art should follow *Lechene* and not apply prior art's age. However, as our "storehouse of knowledge" expands rapidly, it is very uncommon nowadays to find an improvement patent of *only one* prior art.¹⁹⁰ Therefore, the concern that the *Leo* decision should be applied narrowly to only cases involving patents combining several pieces of prior art would scarcely surface.

B. *Inventors Can Work Around Prior Art's Age*

An inventor can theoretically "work around" prior art's age by sitting on his invention and filing his patent application more than roughly 10 years from the time the relevant prior art was added to the "storehouse of knowledge."¹⁹¹ However, the Leahy-Smith American Invent Act's (AIA) "first-to-file" race¹⁹² negated this "work around" argument: other inventors can beat this inventor in a race to the USPTO to file first if this inventor waits too long to file. Thus, the new AIA has a built-in deterrence mechanism to negate this "work around" concern.

185. See discussion *supra* Part II.B.2.b.

186. See *Leo*, 726 F.3d 1346.

187. Otherwise, *Leo* would not have much precedential value. See discussion *supra* Part II.B.2.b.

188. See discussion *supra* Part I.B.1.

189. See discussion *supra* Part III.A and note 148.

190. Note that it is also risky for an inventor to simply file an improvement patent over only one prior art. See *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 401 (2007) ("[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill.").

191. See discussion *supra* Part II.A.

192. Leahy-Smith America Invents Act of 2011, Pub. L. No. 112-29, 125 Stat. 284, 293 (2011) (to be codified in various sections of Title 35 of the U.S. Code). See generally Hung H. Bui, *An Overview of Patent Reform Act of 2011: Navigating the Leahy-Smith America Invents Act Including Effective Dates for Patent Reform*, 93 J. PAT. & TRADEMARK OFF. SOC'Y 441 (2011) (discussing the changes of the AIA).

C. *Increase Rate of Finding Patents Valid*

Some may argue that prior art's age essentially abolishes patent's nonobviousness requirement, which could lead to an increased rate of finding patents valid. Indeed, nonobviousness is the most difficult requirement for a patent applicant and the most frequent ground upon which courts invalidate a patent.¹⁹³ Abolishing nonobviousness would, in effect, liberalize patents and lead to an increased rate of finding patents valid and more patent grants.¹⁹⁴

However, this paper does not argue for an abolishment of nonobviousness, but instead offer a new, quick and easy secondary consideration to infer nonobviousness.¹⁹⁵ The other patentability requirements still serve as gatekeepers to whether the USPTO grants a new patent.¹⁹⁶ Prior art's age will likely not lead to an increased rate of finding patents valid, but actually, to an increased rate of courts correctly upholding truly nonobvious patents. Truly nonobvious patents will continue to encourage innovation¹⁹⁷ and benefit society overall.

D. *Prior Art's Age Seems Counterintuitive*

At first glance, prior art's age might seem counterintuitive.¹⁹⁸ The word "prior" in the term "prior art" has a plain meaning of "earlier in time or order" or "taking precedent,"¹⁹⁹ and there is no other qualifying word to specify the prior art's age. If courts intended to distinguish between new and old prior art, they could have and would have used "new" and "old" or other terms to specify the prior art's age.

193. See discussion *supra* Introduction, Part I.A. and notes 17-18.

194. Cf. Gregory Mandel, *The Non-Obvious Problem: How the Indeterminate Nonobviousness Standard Produces Excessive Patent Grants*, 42 U.C. DAVIS L. REV. 57, 89-109 (2008) (arguing that nonobviousness' "indeterminacy results in an excessive total number of patent grants").

195. See discussion *supra* Parts II.A & III.C.

196. The Patent Act also requires patent-eligible subject matter in § 101, novelty in § 102, written description, enablement and best mode in § 112. See generally 35 U.S.C. §§ 101, 102, 112 (2012).

197. See discussion *supra* Part III.D and note 169.

198. Challenging a common assumption is, in itself, counterintuitive. See Joshua P. Gutwill, *Challenging a Common Assumption of Hands-On Exhibits: How Counterintuitive Phenomena Can Undermine Inquiry*, 33 J. MUSEUM EDUC. 187, 187-98 (discussing that challenging a common assumption begs counterintuitive outcomes). As introduced earlier, the common assumption here was that prior art did not depreciate and thus lasted forever. See discussion *supra* Introduction.

199. MERRIAM WEBSTER'S COLLEGIATE DICTIONARY 927 (Merriam-Webster, 10th ed. 1993).

Contrary to popular belief, “[t]here is a lot about patents that is counter intuitive.”²⁰⁰ Also, courts can and often have been interpreting a term with a restriction or limitation without an existence of a restriction or limitation.²⁰¹ Furthermore, the “storehouse of knowledge” has been expanding rapidly. Without capping how long a prior art lasts in a nonobviousness analysis, ideas for new inventions can eventually run out.²⁰² This may actually discourage new inventions.²⁰³ Therefore, a restriction or limitation for old prior art is warranted. Indeed, the time is ripe for the Federal Circuit to put an age-limit on old prior art in analyzing patent nonobviousness.

E. What About “Forgotten” Prior Art?

Others may argue that given the abundance of prior art and how spread out it will be,²⁰⁴ some prior art could be “forgotten”²⁰⁵ until it “expires.”²⁰⁶

200. *Patent Filing*, MARKETS, PATENTS & ALLIANCES LLC, <http://marketsandpatents.com/solutions/patent-filing/> (last visited Apr. 1, 2015).

201. For example, freedom of speech has certain limitations that were not enumerated in the Constitution. See, e.g., Philip A. Hamburger, *Natural Rights, Natural Law, and American Constitutions*, 102 YALE L.J. 907, 953-54 (1993). See generally U.S. CONST. amend. I (“Congress shall make no law . . . abridging the freedom of speech”).

202. See Simonton, *supra* note 11 (modern science is just “build[ing] on what is already known rather than alter[ing] the foundation of knowledge”).

203. See discussion *supra* Part III.D (arguing that capping a prior art’s age would encourage innovation).

204. See discussion *supra* Part I.A.1 and note 45.

205. Cf. Quinn, *supra* note 43 (“I am frequently told by inventors that they have done a patent search and cannot find anything that remotely resembles what they have come up with.”). In fact, the White House Administration recently promoted “crowdsourcing non-patent prior art” by “call[ing] for the private sector to disclose and share prior art.” Jorge L. Contreras, *Industry Responds to White House Calls for Prior Art, Examiner Training*, PATENTLYO (Feb. 27, 2014), <http://patentlyo.com/patent/2014/02/industry-examiner-training.html>; see also Michelle K. Lee, *Calling on the Crowd to Help Increase Patent Quality*, USPTO DIR.’S F.: A BLOG FROM USPTO’S LEADERSHIP (Mar. 13, 2014), http://www.uspto.gov/blog/director/entry/calling_on_the_crowd_to1 (discussing the organizations who pledged to support the new White House’s initiatives). Also, the U.S. Chief Technology Officer created the Presidential Innovation Fellows program, which aims to “figure out how to ensure that the best prior art is truly available to patent examiner.” Dennis Crouch, *Presidential Innovation Fellowship for USPTO Data Initiatives*, PATENTLYO (Mar. 20, 2014), <http://patentlyo.com/patent/2014/03/presidential-fellowship-initiatives.html>. See generally *Presidential Innovation Fellows*, WHITE HOUSE, <http://www.whitehouse.gov/innovationfellows> (last visited Mar. 28, 2014) (discussing the Presidential Innovation Fellows program in detail).

206. Note that “secret” prior art also exists. See Douglas Thomas, *Secret Prior Art-Get Your Priorities Straight!*, 9 HARV. J.L. & TECH. 147, 150 (1996) (“two forms of secret prior art [are] pending patent applications and prior inventions of others in the United

However, given technology's growth speed, computer and Internet availability, and population growth,²⁰⁷ we as a species have improved our communication and broadened our search for new innovative ideas. Thus, a prior art is unlikely "forgotten." Even if a prior art was "forgotten," such prior art might not have much value in the first place. Its low value actually supports the prior art's age proposal: an old prior art does, in fact, depreciate over time.²⁰⁸ Thus, an old prior art should not be valued higher than its worth in evaluating patent nonobviousness.

CONCLUSION

The proposed tenth secondary consideration, prior art's age, suggests that an old prior art depreciates over time in evaluating a patent's nonobviousness. Specifically, a prior art starts depreciating after about 10 years from the date of adding such prior art to the "storehouse of knowledge." Future case law will provide more guidance to determine the exact cutoff of when a prior art completely lose its value. Prior art's age directly follows current precedents, and stems from a highly persuasive secondary consideration, long-felt need.

This proposal might seem counterintuitive at first, but as the storehouse of knowledge is expanding rapidly and new innovative ideas are running out, it is a good time for the Federal Circuit to put an age-limit on old prior art in analyzing nonobviousness. Furthermore, as fact-finders may feel overwhelmed when they use a nine-factor test to infer nonobviousness, prior art's age helps fact-finders infer nonobviousness quickly and easily, while still encouraging innovation. It will likely not lead to an increased rate of finding patents valid, but actually an increased rate of courts correctly upholding truly nonobvious patents.

States); Kyle Gottuso, Note, "Secret" Prior Art: Does Prior Art in A Provisional Patent Application Bar Future Patents?, 76 MO. L. REV. 917, 917-18 (2011) ("secret" prior art refers to unpublished and published provisional patent applications); see also J. Jonas Anderson, *Secret Inventions*, 26 BERKELEY TECH. L.J. 917, 936-40 (2011) (discussing secret inventions under trade secret and patent). But what is a "secret" prior art's value to the public knowledge if it remains secretive? Most likely very little. Furthermore, the AIA's first-to-file regime has effectively eliminated several types of secret prior art. See Dennis Crouch, *Did the AIA Eliminate Secret Prior Art?*, PATENTLYO (Oct. 10, 2012), <http://patentlyo.com/patent/2012/10/did-the-aia-eliminate-secret-prior-art.html>. For a discussion on the AIA's first-to-file regime, see *supra* note 192 and accompanying text.

207. See *World Internet Users and Population Stats*, INTERNET WORLD STATS: USAGE & POPULATION STAT. (Mar. 19, 2015), <http://www.internetworldstats.com/stats.htm> (providing the world's Internet usage statistics).

208. See discussion *supra* Part II.A.

This proposal brings good news to both pharmaceutical and biotechnological companies as well as other industries. For example, drug makers may worry about one less ground for the courts to invalidate their drug patents, especially when this ground is the most frequent ground for patent invalidity. Patent examiners can also adopt prior art's age to assist them to infer nonobviousness. Such a difficult-to-understand patentability requirement may not be so difficult after all.