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Obviousness as Fact: The Issue of Obviousness in Patent Law Should Be a Question of Fact Reviewed with Appropriate Deference

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Cover Page Footnote

Professor of Law, South Texas College of Law Houston. J.D., summa cum laude, John Marshall Law School, 2002; M.S., Northwestern University, 1990; B.A., University of Illinois at Chicago, 1987. The author thanks Robert Jewett for his research assistance. The author also thanks the faculty of South Texas College of Law Houston for their helpful suggestions at a faculty scholarship workshop. Finally, the author thanks Jessica Y. Field for her encouragement and support. The author welcomes comments via e-mail at tfield@stcl.edu.

Obviousness as Fact: The Issue of Obviousness in Patent Law Should Be a Question of Fact Reviewed with Appropriate Deference

Ted L. Field*

One of the most common defenses that an accused infringer raises in a patent infringement lawsuit is that the patent claims at issue are invalid for obviousness. The question of obviousness is based on several factual determinations, and the U.S. Supreme Court and the U.S. Court of Appeals for the Federal Circuit should sensibly review these determinations with deference to the jury's or trial court's findings. But these courts instead treat the ultimate determination of obviousness as a question of law to be reviewed de novo. This Article challenges the correctness of this standard of review and argues that courts should treat the ultimate determination of obviousness as a question of fact reviewed with appropriate deference. The Article considers several theoretical and practical reasons that support this argument. The Article concludes: (1) based on general policy considerations concerning standards of review, obviousness should be a question of fact; (2) the precedent on which the courts have relied in determining the standard of review for obviousness does not support the conclusion that obviousness is a question of law; (3) the treatment of obviousness as a question of law is inconsistent with the Federal Circuit's treatment of analogous issues in patent law; and (4) based on an examination of recent case law, the Federal Circuit almost always treats obviousness as a de facto question of fact even though it is a

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de jure question of law. Thus, this Article concludes that the Supreme Court should hold that the ultimate issue of obviousness is properly a question of fact to be reviewed with appropriate deference.

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INTRODUCTION

Standards of review are crucially important in appeals.¹ And the judges of the U.S. Court of Appeals for the Federal Circuit² take

¹ 1 STEPHEN ALAN CHILDRESS & MARTHA S. DAVIS, FEDERAL STANDARDS OF REVIEW ix (3d ed. 1999) (“[S]tandards of review are the essential language of appeals.”); Kelly Kunsch, *Standard of Review (State and Federal): A Primer*, 18 SEATTLE U. L. REV. 11, 12 (1994) (“[A]s a concept, [the standard of review] is essential to every appellate court decision. It is to the appellate court what the burden of proof is to the trial court.”); Paul R. Michel, *Appellate Advocacy—One Judge’s Point of View*, 1 FED. CIR. B.J. 1, 2 (1991) (“Standards of review . . . influence the disposition of appeals far more than many advocates realize.”); Peter Nicolas, *De Novo Review in Deferential Robes?: A Deconstruction of the Standard of Review of Evidentiary Errors in the Federal System*, 54 SYRACUSE L. REV. 531, 531 (2004) (“In federal appellate practice, the standard of review is the name of the game.”); Amanda Peters, *The Meaning, Measure, and Misuse of Standards of Review*, 13 LEWIS & CLARK L. REV. 233, 234 (2009) (“Standards of review play a critical role in the appellate decision-making process”); cf. FED. R. APP. P. 28(a)(8)(B) (requiring the appellant’s brief to contain “for each issue, a concise statement of the applicable standard of review”). Indeed, a standard of review “is often ‘outcome determinative,’ in the sense that the difference between victory and defeat on appeal can turn on whether the standard by which the appellate court reviews the trial court’s decision on an issue is plenary or deferential.” Nicolas, *supra*.

² The U.S. Court of Appeals for the Federal Circuit was created in 1982 and has “exclusive jurisdiction over appeals of patent decisions of the district courts.” Ted L. Field, *Improving the Federal Circuit’s Approach to Choice of Law for Procedural Matters in Patent Cases*, 16 GEO. MASON L. REV. 643, 643 (2009). One of Congress’s important goals in taking patent appeals out of the regional circuits and placing them in the newly created Federal Circuit was “to bring national uniformity to patent law.” *Id.* at 643–44. The Federal Circuit also hears appeals from denials of patent grants by the U.S. Patent and Trademark Office. *Id.* at 643 n.2 (citing 28 U.S.C. § 1295(a)(4)(A) (2000)). “Moreover, ‘[p]artly out of recognition of the dangers of specialization,’ [Congress] ‘supplemented [the Federal Circuit’s] jurisdiction with adjudicatory authority in such diverse areas as trademark, tariff and customs law, technology transfer regulations, and government contract and labor disputes.’” *Id.* (first and third alterations in original) (quoting Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 4 (1989)).

standards of review seriously.³ For example, according to retired Judge Paul R. Michel⁴ of the Federal Circuit, “[s]tandards of review . . . influence the disposition of appeals far more than many advocates realize.”⁵ Judge Michel further characterized “a clear statement [in a brief as to] why the standard of review is met or is not met” as “a likely ‘pivot point’ in deciding the appeal.”⁶ Judge Michel has noted:

[I]n all appeals, the controlling question for us is always the same: Did the trial court commit *reversible error*? Not just *any* error, but . . . most of all, error that meets the relevant standards of review. . . . And always, we view the alleged error through the lens of the standard of review.⁷

A “standard of review is the criterion by which the decision of a lower tribunal will be measured by a higher tribunal to determine its correctness or propriety.”⁸ Thus, a standard of review defines the amount of deference that a reviewing court gives to a lower tribunal’s decision.⁹ And a standard of review defines “[w]hat is ne-

³ See Michel, *supra* note 1, at 2 (describing the importance of standards of review to the decision-making process of the Federal Circuit); see also Kevin Casey et al., *Standards of Appellate Review in the Federal Circuit: Substance and Semantics*, 11 FED. CIR. B.J. 279, 280 (2002) (“[S]tandards of review involve complex and subtle questions of both law and tactics, which often impact the appeal more than the facts and the substantive law issues upon which advocates spend so much time and effort.”); Charles W. Shifley, *The Three Stages to Successful Appellate Advocacy Before the Federal Circuit*, 1 J. MARSHALL REV. INTELL. PROP. L. 238, 244 (2002) (“No appeal will have success unless the standard(s) of review [are] identified and appreciated.”).

⁴ Paul Michel served as a judge on the Federal Circuit from 1988 through 2010. *History of the Federal Judiciary: Biographical Directory of Federal Judges*, FED. JUD. CTR., <http://www.fjc.gov/servlet/nGetInfo?jid=1633&cid=999&ctype=na&instat=na> [<https://perma.cc/6CDN-7C9D>] (last visited Feb. 24, 2017). He served as Chief Judge from 2004 through 2010, and then retired from the court. *Id.*

⁵ Michel, *supra* note 1, at 2.

⁶ *Id.* at 6.

⁷ *Id.* at 2.

⁸ Kunsch, *supra* note 1, at 15; see also Richard H.W. Maloy, ‘Standards of Review’—*Just a Tip of the Icicle*, 77 U. DET. MERCY L. REV. 603, 604 (2000) (defining “standard of review” as “the limits of review, or the extent to which, and the manner by which, a court of review will scrutinize the findings of fact, conclusions of law, or rulings of a trial court”).

⁹ CHILDRESS & DAVIS, *supra* note 1, § 1.01, at 1-2; Kunsch, *supra* note 1, at 14.

cessary to overturn the decision” being appealed.¹⁰ Standards of review serve other important purposes too: they “enhance judicial economy, standardize the appellate process, and give the parties in a lawsuit an idea of their chance of success on appeal.”¹¹

But there is at least one more important function of standards of review: they “balance the power among the courts.”¹² Indeed, “the fundamental notion behind a standard of review is that of defining the relationship and power shared among judicial bodies.”¹³ Standards of review that allow an appellate court to give less deference to a decision of a trial court necessarily give more power to the appellate court relative to the trial court than standards of review that are more deferential. Thus, the way in which the appellate court establishes standards of review for various issues is related to how much power the court has. Significantly, the U.S. Supreme Court has recently recognized the importance of the standards of review that the Federal Circuit applies in patent cases by altering the Federal Circuit’s standards of review in two cases since 2014.¹⁴

Commentators have accused the Federal Circuit of generally exercising too much power relative to that of the district courts in patent cases.¹⁵ One particular way in which the Federal Circuit has

¹⁰ Kunsch, *supra* note 1, at 14.

¹¹ Peters, *supra* note 1, at 238.

¹² *Id.*

¹³ CHILDRESS & DAVIS, *supra* note 1, § 1.01, at 1-3.

¹⁴ See *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 835 (2015) (holding that the clearly erroneous standard applies for subsidiary facts in claim construction instead of the de novo standard); *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744, 1749 (2014) (holding that the abuse of discretion standard applies for the determination of whether a case is “exceptional” in awarding attorney fees instead of the de novo standard).

¹⁵ See, e.g., Ted L. Field, *Hyperactive Judges: An Empirical Study of Judge-Dependent “Judicial Hyperactivity” in the Federal Circuit*, 38 VT. L. REV. 625, 640-44 (2014) [hereinafter Field, *Hyperactive Judges*] (describing criticisms by commentators of the Federal Circuit’s “judicial hyperactivity”); Ted L. Field, “*Judicial Hyperactivity in the Federal Circuit: An Empirical Study*,” 46 U.S.F. L. REV. 721, 721-23 (2012) [hereinafter Field, *Judicial Hyperactivity*] (same); Paul R. Gugliuzza, *The Federal Circuit as a Federal Court*, 54 WM. & MARY L. REV. 1791, 1830-36 (2013) (describing how the Federal Circuit has enhanced its power in patent law relative to the power of the district courts); Mark A. Lemley, *Why Do Juries Decide If Patents Are Valid?*, 99 VA. L. REV. 1673, 1735 n.279 (2013) (“The Federal Circuit has been criticized for usurping the district court’s fact-

been accused of exercising such excessive power is by applying standards of review that are not sufficiently deferential.¹⁶ In particular, many commentators have criticized the court's longtime practice of treating the issue of claim construction¹⁷ as a pure question of law and reviewing decisions on claim construction without deference.¹⁸ Indeed, the Federal Circuit originally decided en banc that

finding role." (citing Field, *Judicial Hyperactivity*, *supra*, at 723; William C. Rooklidge & Matthew F. Weil, *Judicial Hyperactivity: The Federal Circuit's Discomfort with Its Appellate Role*, 15 *BERKELEY TECH. L.J.* 725, 726 (2000)); Arti K. Rai, *Specialized Trial Courts: Concentrating Expertise on Fact*, 17 *BERKELEY TECH. L.J.* 877, 883 (2002) ("Ignoring conventional allocation-of-power principles that give trial courts primary authority over factual questions, the Federal Circuit has asserted power over fact."); Rooklidge & Weil, *supra* (describing criticisms by commentators of the Federal Circuit's "judicial hyperactivity"); John R. Thomas, *On Preparatory Texts and Proprietary Technologies: The Place of Prosecution Histories in Patent Claim Interpretation*, 47 *UCLA L. REV.* 183, 209–10 (1999) ("Seeking to expand its ability to regulate patent infringement disputes, the Federal Circuit sought an interpretive strategy that would provide it with unrestrained powers of review.").

¹⁶ Gugliuzza, *supra* note 15, at 1831 ("[T]he court has shaped patent law's standards of appellate review to give itself plenary power to resolve many important substantive [patent-law] issues . . . In patent cases, the Federal Circuit has cast many important issues as questions of law, rather than questions of fact, enhancing the court's authority over district courts.").

¹⁷ The Patent Act requires that the specification of every patent must "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention." 35 U.S.C. § 112(b) (2012). "A patent claim is a single-sentence definition of the scope of the patent owner's property right—that is, her right to exclude others from making, using, selling, offering to sell, or importing the invention, in this country, during the term of the patent." JANICE M. MUELLER, *PATENT LAW* 78 (4th ed. 2013). The claim describes the "metes and bounds" of the invention. *Id.* "Claim construction" or "claim interpretation" is the process by which a court interprets the meaning of the claim terms in a particular patent. *See id.* at 447–65. Claim construction can be "the single most important event in the course of a patent litigation." *Id.* at 447 (quoting *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 659 F.3d 1369, 1370 (Fed. Cir. 2011) (Moore, J., dissenting from denial of rehearing en banc)).

¹⁸ *See, e.g.*, Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 *BERKELEY TECH. L.J.* 1075, 1113 (2001) (linking the Federal Circuit's high reversal rate with the de novo standard of review for claim construction decisions); Field, *Judicial Hyperactivity*, *supra* note 15, at 733 ("Commentators have accused the Federal Circuit of overstepping its proper appellate role by reviewing claim construction decisions de novo instead of giving deference to the claim construction decisions of the district courts."); Rai, *supra* note 15, at 883 ("Ignoring conventional allocation-of-power principles that give trial courts primary authority over factual questions, the Federal Circuit has asserted power over fact. In the context of claim construction, it has done so simply by declaring claim construction to be a pure question

claim construction was a pure question of law to be reviewed de novo in the 1998 case *Cybor Corp. v. FAS Technologies, Inc.*¹⁹ And despite criticism of this decision,²⁰ the Federal Circuit in 2014 reaffirmed the *Cybor Corp.* standard en banc, holding that it would continue to review claim-construction decisions with no deference.²¹

But in the 2015 case *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*,²² the Supreme Court, recognizing the importance of this issue,²³ overturned the Federal Circuit's practice of reviewing claim-construction decisions with no deference.²⁴ In *Teva*, the Court began by observing that Federal Rule of Civil Procedure 52(a)²⁵ requires all courts of appeals to review factual determinations made by judges using the clearly erroneous standard.²⁶ The Court reasoned that no exception to this rule should apply for the review of

of law subject to de novo review.”); Rooklidge & Weil, *supra* note 15, at 748 (“[B]y confirming that claim construction is an issue of law for the court to decide, the Supreme Court’s ruling in *Markman v. Westview Instruments* plainly hastened the Federal Circuit’s move toward greater involvement as an appellate tribunal in the sorts of de novo review that have tempted the court to take on the role of advocate.”); Thomas Chen, Note, *Patent Claim Construction: An Appeal for Chevron Deference*, 94 VA. L. REV. 1165, 1180 (2008) (“[A]ppellate review of claim construction would greatly benefit from a more deferential approach that simply assesses whether the district court derived a reasonable claim interpretation, in place of the currently inefficient pursuit of a single best answer.”).

¹⁹ 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc).

²⁰ See *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272, 1296 (Fed. Cir. 2014) (en banc) (O’Malley, J., dissenting) (“District judges, both parties in this case, and the majority of intellectual property lawyers and academics around the country will no doubt be surprised by today’s majority opinion [reaffirming *Cybor*]—and for good reason.”).

²¹ *Id.* at 1292 (majority opinion).

²² 135 S. Ct. 831 (2015).

²³ *Id.* at 836 (noting that the Court “believe[s] it important to clarify the standard of review” that the Federal Circuit must apply in reviewing claim construction decisions).

²⁴ *Id.* at 835 (holding that the Federal Circuit “must apply a ‘clear error,’ not a *de novo*, standard of review” when it reviews the factual underpinnings of a claim construction decision). The Court’s holding did not come as a surprise to commentators. See, e.g., Dennis Crouch, *Supreme Court to Consider De Novo Review of Claim Construction*, PATENTLY-O (Mar. 31, 2014), <http://patentlyo.com/patent/2014/03/supreme-consider-construction.html> [<https://perma.cc/WR52-HNNE>] (“I’ll speculate here that the result will be a unanimous rejection of the Federal Circuit’s no deference policy.”).

²⁵ For a discussion of how the Federal Circuit applies rule 52(a) in the context of reviewing an obviousness determination, see *infra* text accompanying notes 202–15.

²⁶ *Teva*, 135 S. Ct. at 836.

factual underpinnings in claim-construction decisions.²⁷ The Court then noted that both “precedent” and “practical considerations favor clear error review.”²⁸ The Court rejected arguments to the contrary²⁹ and held that the Federal Circuit must review the factual underpinnings involved in a claim-construction decision for clear error.³⁰ The Court thus effectively overruled the Federal Circuit’s decisions in *Cybor Corp. v. FAS Technologies, Inc.*³¹ and *Lighting Ballast Control LLC v. Philips Electronics North American Corp.*³² to treat claim construction as a pure question of law to be reviewed de novo.

Further underscoring the importance of standards of review in patent cases, the Supreme Court in 2014 overruled the Federal Circuit’s practice of using a non-deferential standard of review in an area of patent law involving attorney fees. Under § 285 of the Patent Act, a party is entitled to an award of attorney fees if the case is “exceptional.”³³ In *Highmark Inc. v. Allcare Health Management System, Inc.*,³⁴ the Court considered the propriety of the Federal Circuit’s practice of reviewing a district court’s determination as to whether a case is “exceptional”³⁵ without deference.³⁶ The Court considered the text of the statute and held that it “em-

²⁷ *Id.* at 837. The Court implicitly recognized that even if “convincing ground[s]” for an exception existed, the Court likely lacked the power to create such an exception to a Federal Rule of Civil Procedure. *See id.* (“Even if exceptions to the Rule were permissible, we cannot find any convincing ground for creating an exception to that Rule here.”). In a dissent authored by Justice Thomas and joined by Justice Alito, Justice Thomas disagreed that rule 52(a) should apply to the review of claim-construction decisions. *Id.* at 844–45 (Thomas, J., dissenting). In his dissent, Justice Thomas reasoned that any apparent “subsidiary evidentiary findings” should properly subsumed into the overall question of law presented by a claim-construction decision. *Id.* at 845–53.

²⁸ *Id.* at 838–39 (majority opinion).

²⁹ *Id.* at 839–42.

³⁰ *Id.* at 835.

³¹ 138 F.3d 1448 (Fed. Cir. 1998) (en banc).

³² 744 F.3d 1272 (Fed. Cir. 2014) (en banc).

³³ *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749, 1755–56 (2014) (citing 35 U.S.C. § 285 (2012)).

³⁴ 134 S. Ct. 1744 (2014).

³⁵ As the Supreme Court held in *Octane Fitness* in 2015, “an ‘exceptional’ case is simply one that stands out from others with respect to the substantive strength of a party’s litigating position (considering both the governing law and the facts of the case) or the unreasonable manner in which the case was litigated.” 134 S. Ct. at 1756.

³⁶ *Highmark*, 134 S. Ct. at 1746–47.

phasizes the fact that the determination [of whether a case is exceptional] is for the district court, which suggests some deference to the district court upon appeal.”³⁷ The Court also noted that “as a matter of the sound administration of justice, the district court is better positioned to decide whether a case is exceptional because it lives with the case over a prolonged period of time.”³⁸ Finally, the court reasoned that “the question is multifarious and novel, not susceptible to useful generalization of the sort that *de novo* review provides, and likely to profit from the experience that an abuse-of-discretion rule will permit to develop.”³⁹ Thus, the Court held that the Federal Circuit must abandon its practice of reviewing this issue *de novo* and instead “apply an abuse-of-discretion standard in reviewing all aspects of a district court’s . . . determination” as to whether a case is “exceptional.”⁴⁰

The importance of standards of review in patent litigation, as shown by the Supreme Court’s recent attention to standards of review applied by Federal Circuit, gives rise to this question: In what other areas of patent law does the Federal Circuit currently apply non-deferential review where instead the court should really be applying a deferential standard of review? This Article explores an answer to this question for one particular area of the law: invalidity⁴¹ due to obviousness.⁴² The Supreme Court and Federal Circuit currently review the ultimate decision that a patent is or is not invalid due to obviousness with no deference.⁴³ This Article pro-

³⁷ *Id.* at 1748 (quoting *Pierce v. Underwood*, 487 U.S. 552, 559 (1988)).

³⁸ *Id.* (citation omitted) (quoting *Pierce*, 487 U.S. at 559–60).

³⁹ *Id.* at 1748–49 (quoting *Pierce*, 487 U.S. at 562).

⁴⁰ *Id.*

⁴¹ In a patent infringement lawsuit, an accused infringer can raise the affirmative defense of invalidity. *See* 35 U.S.C. § 282(b)(2)–(3) (2012). In bringing an invalidity defense, the accused infringer asserts that one or more of the asserted patent claims are invalid for failure to satisfy any of the patentability requirements, such as patent-eligible subject matter, utility, novelty, and nonobviousness. MUELLER, *supra* note 17, at 582. And once a court declares that a patent claim is invalid, the patent owner is precluded from asserting that claim against any other infringer. *Id.* at 581 (citing *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313 (1971)). Thus, the effect of an invalidity determination is that the claim “is dead and cannot be resuscitated.” *Id.*

⁴² For a discussion of the issue of invalidity due to obviousness, see *infra* Section I.B.

⁴³ *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966); *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566 (Fed. Cir. 1987). For a discussion of the Federal Circuit’s

poses that the obviousness determination should be reviewed as a question of fact⁴⁴—thus, for clear error⁴⁵ in a bench trial,⁴⁶ and for substantial evidence⁴⁷ in a jury trial.⁴⁸

The most commonly litigated invalidity defense in patent-infringement lawsuits is obviousness.⁴⁹ The obviousness determination is governed by § 103 of the Patent Act,⁵⁰ under which a patent claim is invalid “if the differences between the claimed invention and the prior art⁵¹ are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.”⁵² The Supreme Court has held that the obviousness analysis involves four factual determinations, known as the “*Graham* factors”: “(1) level of ordinary skill in the art; (2) scope and content of the prior art; (3) differences between the claimed invention and the prior art; and (4) secondary

reasoning behind its holding that obviousness is a question of law, reviewed de novo, see *infra* Section I.C.

⁴⁴ This Article does not analyze the related, though different, issue of whether the question of obviousness is more properly a decision to be made by the court and never a jury. For a recent and thorough treatment of this separate issue, see generally Lemley, *supra* note 15.

⁴⁵ See FED. R. CIV. P. 52(a) (requiring a “clearly erroneous” standard of review with respect to the findings of fact in a bench trial). For a discussion of the clearly erroneous standard, see *infra* Section I.A.2.

⁴⁶ *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 736 (Fed. Cir. 2013).

⁴⁷ See *Kunsch*, *supra* note 1, at 24 (“Facts found by a jury are reviewed with the common law ‘substantial evidence’ test.” (citing *Glasser v. United States*, 315 U.S. 60, 80 (1942))). For a discussion of the substantial-evidence standard, see *infra* Section I.A.3.

⁴⁸ *Sanofi-Aventis Deutschland GmbH v. Glenmark Pharm. Inc., USA*, 748 F.3d 1354, 1358 (Fed. Cir. 2014).

⁴⁹ See Matthew Beutler, *How a Comparative Analysis of Federal Circuit Standards of Review Supports Limiting the Role of Juries in Determinations of Obviousness*, 92 J. PAT. & TRADEMARK OFF. SOC’Y 451, 453 (2010) (“[T]he question of obviousness is so frequently found at the center of disputes concerning patents in both pre-issuance patent procurement as well as post-issuance patent enforcement.”). For a more detailed discussion of the obviousness defense, see *infra* Section I.B.

⁵⁰ 35 U.S.C. § 103 (2012).

⁵¹ “[P]rior art can be understood at a very basic level as the legally available technology and information with which the claimed invention will be compared in order to determine whether that invention is patentable.” MUELLER, *supra* note 17, at 284. The exact requirements for a particular piece of technology or information to be considered prior art are defined by the statute. See 35 U.S.C. § 102 (2012).

⁵² § 103.

considerations (i.e., objective indicia of nonobviousness).”⁵³ After making findings as to these factors, the decision maker must then determine whether the claimed invention would have been obvious to a person having ordinary skill in the art before the effective filing date.⁵⁴ Importantly, the obviousness determination is objective because it requires analysis of obviousness with respect to a hypothetical third party—the hypothetical “person having ordinary skill in the art to which the claimed invention pertains.”⁵⁵

Although the Supreme Court and Federal Circuit classify this ultimate determination of obviousness as one of law reviewed without deference,⁵⁶ this Article proposes that it should properly be classified as one of fact and reviewed with deference for the following reasons:

- The Federal Circuit’s reasoning that the ultimate question of obviousness is really a question of law rather than a question of fact is flawed;⁵⁷
- The Supreme Court’s statement that the ultimate question of obviousness is one of law was never properly supported by precedent;⁵⁸
- Treating obviousness as a question of law is inconsistent with how the Federal Circuit treats other analogous patent-law issues, such as anticipation and infringement under the doctrine of equivalents;⁵⁹ and
- Even though under current law obviousness is supposed to be a question of law, district courts nonetheless treat the issue as a de facto question of fact, without the objection of the Federal Circuit.⁶⁰

⁵³ MUELLER, *supra* note 17, at 279.

⁵⁴ See *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

⁵⁵ § 103; see also *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

⁵⁶ *Graham*, 383 U.S. at 17; *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566 (Fed. Cir. 1987).

⁵⁷ For a discussion of this issue, see *infra* Section I.A.

⁵⁸ For a discussion of this issue, see *infra* Section I.B.

⁵⁹ For a discussion of this issue, see *infra* Section I.C.

⁶⁰ For a discussion of this issue, see *infra* Section I.D.

For these reasons, in an appropriate case, the Supreme Court should hold that the ultimate determination of obviousness is a question of fact to be reviewed as such.

Part I begins with a description of standards of review and the difference between questions of law and fact. Part II discusses the two invalidity defenses based on the prior art—anticipation and obviousness. Part III then describes in detail why the ultimate question of obviousness should properly be a question of fact and reviewed by the Federal Circuit with deference.

I. STANDARDS OF REVIEW AND QUESTIONS OF LAW AND FACT

This Part provides background information regarding standards of review and questions of law and fact. Section I.A discusses the different standards of review that are applied by the Federal Circuit. Section I.B discusses how reviewing courts in general decide whether an issue is a question of law versus a questions of fact.

A. The Federal Circuit's Standards of Review

A standard of review “prescribes the degree of deference given by the reviewing court to the actions or decisions under review.”⁶¹ Further, it is “the criterion by which the decision of a lower tribunal will be measured by a higher tribunal to determine its correctness or propriety.”⁶² In essence, a standard of review defines “[w]hat is necessary to overturn the decision” being appealed.⁶³ It is—perhaps surprisingly—a relatively new concept in appellate jurisprudence.⁶⁴ But the standard of review has become vitally important in appellate decision-making at the Federal Circuit.⁶⁵ The

⁶¹ CHILDRESS & DAVIS, *supra* note 1, § 1.01, at 1-2.

⁶² Kunsch, *supra* note 1, at 15.

⁶³ *Id.* at 14.

⁶⁴ Peters, *supra* note 1, at 237-38. Indeed, “[t]hrough the language for modern-day standards of review can be traced to early American opinions, the concept of standards of review was not firmly rooted in opinions until the latter part of the twentieth century.” *Id.* at 237.

⁶⁵ See Michel, *supra* note 1, at 2 (describing the importance of standards of review to the decision-making process of the Federal Circuit); see also Casey et al., *supra* note 3, at 280 (“[S]tandards of review involve complex and subtle questions of both law and tactics,

Federal Circuit uses four basic standards in reviewing district-court decisions: (1) de novo; (2) clear error; (3) substantial evidence; and (4) abuse of discretion.⁶⁶ The following sections discuss each of these standards in turn.

1. De Novo

The least deferential standard used by the Federal Circuit is the de novo standard.⁶⁷ Where the court reviews an issue under the de novo standard, it “gives the trial tribunal little, if any, deference.”⁶⁸ Indeed, the decision under review “receives little or no presumption of correctness.”⁶⁹ In applying the de novo standard, the court “must exercise its independent judgment on the evidence of record and [weigh] it as a trial court” would.⁷⁰ Although the de novo standard does not require the court to give any deference to the decision it is reviewing, nonetheless, the court is “not . . . re-

which often impact the appeal more than the facts and the substantive law issues upon which advocates spend so much time and effort.”); Shifley, *supra* note 3, at 244 (“No appeal will have success unless the standard(s) of review [are] identified and appreciated.”); *cf.* Bryan Adamson, *All Facts Are Not Created Equal*, 13 TEMP. POL. & C.R. L. REV. 629, 629 (2004) (“It is no exaggeration to say that classifying a trial court’s findings as findings of fact, findings of law, or mixed questions of law and fact can dictate the outcome on appeal.”).

⁶⁶ Casey et al., *supra* note 3, at 285–86. Where reviewing cases from various agency tribunals—as opposed to district courts—the Federal Circuit uses standards of review in addition to these four, such as the “arbitrary or capricious” standard. *Id.* at 287. But this Article focuses exclusively on the Federal Circuit’s review of patent decisions made by district courts, not on its review of agency determinations.

⁶⁷ The Federal Circuit sometimes uses the term “without deference” for the de novo standard of review. *See, e.g.*, Synqor, Inc. v. Artesyn Techs., Inc., 709 F.3d 1365, 1373 (Fed. Cir. 2013) (“On the issue of obviousness, this court reviews . . . the ultimate conclusion of obviousness without deference.”). The court also sometimes refers to de novo review as “plenary review.” *See, e.g.*, Net MoneyIN, Inc. v. VeriSign, Inc., 545 F.3d 1359, 1365 (Fed. Cir. 2008) (“Indefiniteness under 35 U.S.C. § 112, ¶ 2 is also a question of law subject to plenary review.”).

⁶⁸ Casey et al., *supra* note 3, at 285; *see also* Kunsch, *supra* note 1, at 37 (defining de novo review as where a “reviewing court makes an original appraisal of all the evidence to decide whether or not it believes [the conclusions of the trial court]” (alteration in original) (quoting Bose Corp. v. Consumers Union of U.S., Inc., 466 U.S. 485, 514 n.31 (1984))).

⁶⁹ Casey et al., *supra* note 3, at 285.

⁷⁰ SSIH Equip. S.A. v. U.S. Int’l Trade Comm’n, 718 F.2d 365, 381 (Fed. Cir. 1983).

quired to ignore the decision below.”⁷¹ The court applies the de novo standard to issues that the court defines as purely legal.⁷²

2. Clear Error

In contrast to the de novo standard, the Federal Circuit must give at least some deference to a district-court judge’s factual findings in a review under the clearly erroneous standard.⁷³ This standard is required by Federal Rule of Civil Procedure 52(a), which provides: “Findings of fact, whether based on oral or other evidence, must not be set aside unless clearly erroneous”⁷⁴ The Supreme Court has defined a finding as “clearly erroneous” where “although there is evidence to support it, the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed.”⁷⁵ The Seventh Circuit has put a colorful gloss on this definition, which emphasizes the great degree of deference this standard requires: “To be clearly erroneous, a decision must strike us as more than just maybe or probably wrong; it must, as one member of this court recently stated during oral argument, strike us as wrong with the force of a five-week-old, unrefrigerated dead fish.”⁷⁶

Although it is deferential, the clearly erroneous standard is nonetheless lenient.⁷⁷ The issue under the clearly erroneous standard is not whether a particular finding is actually correct in the opinion of the Federal Circuit; instead, the issue is whether the finding was “clearly wrong.”⁷⁸ Thus, in some cases, the clearly er-

⁷¹ *Id.* Thus, under the de novo standard, although the court in theory reviews a decision without any deference, “[i]n practice . . . the trial tribunal’s decision will at least have a subtle effect.” Casey et al., *supra* note 3, at 290. Indeed, the court may be influenced by “the persuasive force of a well-written trial tribunal opinion, which reasons forcefully and examines deftly the law and precedent” even under the de novo standard.

Id.

⁷² Casey et al., *supra* note 3, at 289–90.

⁷³ *Id.* at 286.

⁷⁴ FED. R. CIV. P. 52(a)(6).

⁷⁵ United States v. U.S. Gypsum Co., 333 U.S. 364, 395 (1948).

⁷⁶ Parts & Elec. Motors, Inc. v. Sterling Elec., Inc., 866 F.2d 228, 233 (7th Cir. 1988); Casey et al., *supra* note 3, at 299 n.81 (quoting *Parts & Elec. Motors*, 866 F.2d at 233).

⁷⁷ Casey et al., *supra* note 3, at 299.

⁷⁸ *Id.*

erroneous standard binds the Federal Circuit to affirm a finding of fact even if it “would also have affirmed [a] contrary finding[.]”⁷⁹

An important policy rationale for requiring that a reviewing court defer to a district court’s factual findings is that the district-court judge is “in a better position to make findings on the issue” in question.⁸⁰ Indeed, as one commentator has explained:

[A district court judge is] present throughout the entire course of the trial. [The judge] can observe first-hand the demeanor of each witness and thereby determine each witness’ credibility. [The judge] spend[s] more time with the facts and parties of the case so [the judge] generally [has] a better understanding of the context within which an issue arises.⁸¹

Other important policy rationales for deference relate to “the judicial system and what such deference does for the system itself.”⁸² One important such institutional rationale is that of finality: “The more deference given to the decision of the lower tribunal, the less likely the losing party is to appeal that decision.”⁸³ This rationale also leads to the idea that such finality will reduce court congestion because, “[i]f fewer parties appeal, there will be fewer

⁷⁹ *Id.*

⁸⁰ Kunsch, *supra* note 1, at 20. Indeed, Federal Rule of Civil Procedure 52(a)(6) itself recognizes this rationale in its text: “[T]he reviewing court must give due regard to the trial court’s opportunity to judge the witnesses’ credibility.” FED. R. CIV. P. 52(a)(6).

⁸¹ Kunsch, *supra* note 1, at 20. Although the district court judge’s ability to observe the demeanor of witnesses is an important justification for deference under the clearly erroneous standard, Rule 52(a) nonetheless requires a reviewing court to review all of a district court’s factual findings with deference—even if those findings are based on documentary evidence rather than oral testimony. FED. R. CIV. P. 52(a)(6) (“Findings of fact, *whether based on oral or other evidence*, must not be set aside unless clearly erroneous . . .” (emphasis added)). Despite this requirement, a court of appeals “may more easily find clear error when it has the same documents for decision as were available to the” district court. Casey et al., *supra* note 3, at 300. But “the Supreme Court has recognized that greater deference is due under the clearly erroneous standard to [the district court’s] findings . . . based upon the credibility of witnesses.” *Id.* (citing Anderson v. City of Bessemer City, N.C., 470 U.S. 564, 573 (1985); Bose Corp. v. Consumers Union, 466 U.S. 485, 500 (1984)).

⁸² Kunsch, *supra* note 1, at 19.

⁸³ *Id.*

appellate cases.”⁸⁴ Finally, deference to the district court’s factual decisions helps maintain the public’s confidence in district-court judges; if the courts of appeals’ reversal rates were greater due to a lack of deference to district courts’ findings, the public’s confidence may be reduced.⁸⁵

Additionally, the assignment of the amount of deference that a court of appeals must give to a district court’s findings “balance[s] the power among the courts.”⁸⁶ Indeed, “the fundamental notion behind a standard of review is that of defining the relationship and power shared among judicial bodies.”⁸⁷ Standards of review that allow an appellate court to give less deference to a decision of a trial court necessarily give more power to the appellate court relative to the trial court than standards of review that are more deferential. Thus, the way in which the appellate court establishes how much deference to give the district court for various issues is related to the amount of power the court has.

3. Substantial Evidence

Whereas the Federal Circuit uses the clear-error standard to review a district-court judge’s factual findings, the court uses the substantial-evidence standard to review a jury’s factual findings.⁸⁸ The substantial-evidence standard is an even more deferential standard than clear error, “based on the policy judgment that bench trial findings are less sacrosanct on review than are jury verdicts.”⁸⁹ This result flows from the Seventh Amendment.⁹⁰ In addition to providing the right to a jury trial in civil litigation, the Seventh Amendment also limits appellate review of a jury’s factual findings: “[N]o fact tried by a jury, shall be otherwise reexamined in any Court of the United States, than according to the rules of the

⁸⁴ *Id.* at 20.

⁸⁵ *Id.*

⁸⁶ Peters, *supra* note 1, at 238.

⁸⁷ CHILDRESS & DAVIS, *supra* note 1, § 1.01, at 1-3.

⁸⁸ Casey et al., *supra* note 3, at 307; *see also, e.g.*, Kinetic Concepts, Inc. v. Smith & Nephew, Inc., 688 F.3d 1342, 1360 (Fed. Cir. 2012).

⁸⁹ Casey et al., *supra* note 3, at 308.

⁹⁰ U.S. CONST. amend. VII.

common law.”⁹¹ Jury trials are very common in patent litigation today,⁹² and in a jury trial, the jury usually decides most of the important issues.⁹³

Under the substantial-evidence standard, a reviewing court must affirm a jury’s factual finding as long as it is supported by substantial evidence.⁹⁴ The Supreme Court has defined “substantial evidence” as follows:

Substantial evidence is more than a scintilla, and must do more than create a suspicion of the existence of the fact to be established. “It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion,” and it must be enough to justify, if the trial were to a jury, a refusal to direct a verdict when the conclusion sought to be drawn from it is one of fact for the jury.⁹⁵

4. Abuse of Discretion

Abuse of discretion is the most deferential standard.⁹⁶ A reviewing court uses this highly deferential standard for the review of issues where the district court “has a range of choices in deciding an issue.”⁹⁷ Under the abuse-of-discretion standard, a reviewing court “will not disturb [the district court’s] choice as long as the choice is within the predetermined range, and is not influenced by any mistake of law or [sufficiently] erroneous findings of fact.”⁹⁸

⁹¹ *Id.*; see also Casey et al., *supra* note 3, at 308 (“Appellate challenges to jury findings of fact rarely succeed, because the Seventh Amendment proscribes review of such findings even more than Rule 52 restricts review of trial court findings of fact.”).

⁹² See Lemley, *supra* note 15, at 1674 (“The jury trial is a fixture of modern patent litigation.”). Professor Lemley determined that, of all the U.S. patent trials between 2000 and June 2011, almost seventy-five percent of them were jury trials rather than bench trials. *Id.* at 1674 n.1 (citing Mark A. Lemley et al., *Rush to Judgment? Trial Length and Outcomes in Patent Cases*, 41 AIPLA Q.J. 169, 172, 174 (2013)).

⁹³ *Id.* at 1674.

⁹⁴ 19 JAMES W. MOORE ET. AL., MOORE’S FEDERAL PRACTICE: CIVIL § 206.02 (3d ed. 2016); Peters, *supra* note 1, at 245.

⁹⁵ NLRB v. Columbian Enameling & Stamping Co., 306 U.S. 292, 300 (1939) (citation omitted) (quoting *Consol. Edison Co. of N.Y. v. NLRB*, 305 U.S. 197, 229 (1938)).

⁹⁶ Peters, *supra* note 1, at 243.

⁹⁷ Casey et al., *supra* note 3, at 310.

⁹⁸ *Id.*

The Federal Circuit specifically defines “abuse of discretion” as where a “decision was based on clearly erroneous findings of fact, an incorrect conclusion of law, or a clear error of judgment.”⁹⁹

The Federal Circuit applies the abuse-of-discretion standard to equitable determinations, such as injunctions, inequitable conduct, enhanced damages, and attorney fees.¹⁰⁰ The court also applies the abuse-of-discretion standard to “discretionary matter[s] involving the admission of evidence, discovery, or other trial management issues.”¹⁰¹ Indeed, because this standard is so highly deferential, the Federal Circuit rarely reverses such decisions.¹⁰²

B. How Courts Decide Whether an Issue Is a Question of Law Versus a Question of Fact

Courts admittedly have difficulty in deciding whether an issue is properly a question of law as opposed to a question of fact.¹⁰³ But the resolution of this question is important because to determine what level of appellate deference, if any, is appropriate for a particular issue, a court must decide whether the issue should be consi-

⁹⁹ *E.g.*, *Whitserve, LLC v. Computer Packages, Inc.*, 694 F.3d 10, 37 (Fed. Cir. 2012) (citing *Spectrallytics, Inc. v. Cordis Corp.*, 649 F.3d 1336, 1347 (Fed. Cir. 2011)).

¹⁰⁰ *Casey et al.*, *supra* note 3, at 310; *see also* *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744, 1749 (2014) (holding that the abuse of discretion standard applies to the Federal Circuit’s review of a decision as to whether a case is “exceptional” to support an award of attorney fees).

¹⁰¹ *Casey et al.*, *supra* note 3, at 310. Technically, for procedural—rather than substantive—issues such as these, the Federal Circuit applies the standard of review as indicated by the precedent of the court of appeals of the regional circuit from within which the district court was located, rather than applying its own determination as to which standard to apply. *See* *Field*, *supra* note 2, at 645 (citing *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 1359 (Fed. Cir. 1999) (en banc in relevant part)). But, for issues involving evidence, discovery, or trial management, the circuit courts of appeals uniformly apply the abuse of discretion standard. *See* *CHILDRESS & DAVIS*, *supra* note 1, § 4.01, at 4-2.

¹⁰² *Casey et al.*, *supra* note 3, at 310.

¹⁰³ *See* *Miller v. Fenton*, 474 U.S. 104, 113 (1985) (“[T]he appropriate methodology for distinguishing questions of fact from questions of law has been, to say the least, elusive.”); *Pullman-Standard v. Swint*, 456 U.S. 273, 288 (1982) (“The Court has previously noted the vexing nature of the distinction between questions of fact and questions of law.” (citing *Baumgartner v. United States*, 322 U.S. 665, 671 (1944))); *Nathan Isaacs*, *The Law and the Facts*, 22 COLUM. L. REV. 1, 1 (1922) (“The delusive simplicity of the distinction between questions of law and questions of fact has been found a will-of-the-wisp by travelers approaching it from several directions.”).

dered a question of law or a question of fact.¹⁰⁴ Although some issues are easy to classify as either questions of law or fact,¹⁰⁵ other issues present greater difficulty.¹⁰⁶ Indeed, it is often more realistic to think of a particular issue as lying on a continuum between law and fact rather than as purely law or purely fact.¹⁰⁷ Although there is no set rule for determining where on the spectrum a particular issue falls between law and fact,¹⁰⁸ the Supreme Court has established, and commentators have proposed, guidelines for doing so.¹⁰⁹

Section I.B.1 begins by discussing questions of fact. Next, Section I.B.2 discusses questions of law. Finally, Section I.B.3 discusses how many courts use a functional approach to determining questions of fact versus questions of law.

¹⁰⁴ See, e.g., *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 844–52 (2015) (Thomas, J., dissenting) (reasoning that the Court must consider whether claim construction is a question of law or fact to determine whether Federal Rule of Civil Procedure 52(a)(6) requires review of subsidiary facts under a clearly erroneous standard); CHILDRESS & DAVIS, *supra* note 1, § 2.21, at 2-116 (“Federal Rule of Civil Procedure 52 does not draw the lines demarcating *fact*, protected by the rule on appeal, and *legal* or *mixed law-fact* questions, which are generally freely reviewed except where they are controlled by underlying facts.”); Casey et al., *supra* note 3, at 316 (“[T]he type of issue under view, law versus fact, helps to determine the standard of review.”); Steven Alan Childress, “Clearly Erroneous”: *Judicial Review over District Courts in the Eighth Circuit and Beyond*, 51 MO. L. REV. 93, 98 (1986) (“The law-fact distinction . . . is crucial because the clearly erroneous rule protects factfindings from summary reversal but does not apply to errors of law, reviewed de novo.”); Kunsch, *supra* note 1, at 27–28; Robert L. Stern, *Review of Findings of Administrators, Judges and Juries: A Comparative Analysis*, 58 HARV. L. REV. 70, 93–95 (1944) (“More troublesome has been the problem as to just what questions are to be treated as fact or as law.”).

¹⁰⁵ Ray A. Brown, *Fact and Law in Judicial Review*, 56 HARV. L. REV. 899, 900 (1943) (“[E]ven the most obstinate realist could distinguish in kind between the question whether the Rule against Perpetuities may operate to render void a grantor’s power of termination for breach of condition subsequent, and the question whether it was Tom Jones or Bob Smith who drove the automobile that ran over Billy Brown.”).

¹⁰⁶ Casey et al., *supra* note 3, at 317 (“The distinction between law and fact for purposes of identifying standard of review is often a difficult line to draw.”).

¹⁰⁷ *Id.* at 318; accord Kunsch, *supra* note 1, at 21.

¹⁰⁸ *Miller*, 474 U.S. at 113; Casey et al., *supra* note 3, at 318; Kunsch, *supra* note 1, at 22.

¹⁰⁹ See, e.g., *Teva*, 135 S. Ct. at 845 (Thomas, J., dissenting); *Miller*, 474 U.S. at 112–18; *Bose Corp. v. Consumers Union*, 466 U.S. 485, 498–511 (1984); *Pullman-Standard v. Swint*, 456 U.S. 273, 285–90 (1982); *Baumgartner v. United States*, 322 U.S. 665, 670–71 (1944); Childress, *supra* note 104, at 131–37, 154–88; Kunsch, *supra* note 1, at 21–23; Stern, *supra* note 104, at 93–99.

1. Questions of Fact

Some issues are clearly questions of fact.¹¹⁰ For example, an issue involving the determination of a pure historical fact¹¹¹ is undoubtedly a question of fact.¹¹² Questions of fact also include issues of a more abstract nature, such as the state of mind of an individual—even where that “state of mind may be of legal importance.”¹¹³ And even though an inference is required to determine an issue, that issue may still be considered a question of fact.¹¹⁴

Another type of fact is the “ultimate fact,” which is more difficult to classify as a question of law or fact than other types of facts. An “ultimate fact” is a fact that embodies the “ultimate issue for resolution.”¹¹⁵ Indeed, as one commentator has described:

Ultimate facts present a different kind of “factual” inquiry, one involving a process that “implies the application of standards of law.” Like some historical facts, ultimate facts are derived by reasoning or inference from evidence, but, like issues of law, they incorporate legal principles or policies that give them independent legal significance. They often involve the *characterization* of historical facts, and

¹¹⁰ Childress, *supra* note 104, at 132.

¹¹¹ “A historical fact is a thing done, an action performed, or an event or occurrence.” William W. Schwarzer et al., *The Analysis and Decision of Summary Judgment Motions*, 139 F.R.D. 441, 455 (1992).

¹¹² See *Teva*, 135 S. Ct. at 845 (Thomas, J., dissenting) (“In general, [the Supreme Court has] treated district court determinations as ‘analytically more akin to a fact’ the more they pertain to a simple historical fact of the case”); Francis H. Bohlen, *Mixed Questions of Law and Fact*, 72 U. PA. L. REV. 111, 112 (1924) (“The primary and popular meaning of the word ‘fact’ is something which has happened or existed”); Brown, *supra* note 105, at 902 (“Questions of fact involve inquiries . . . as to the existence of acts and states of being in the concrete physical universe”); Casey et al., *supra* note 3, at 317 (“Generally, facts are those findings that respond to inquiries about who, when, what, and where.”) (internal quotation marks omitted); Childress, *supra* note 104, at 132 (“[W]hat Alice did yesterday is a ‘pure fact’”); Kunsch, *supra* note 1, at 22 (“Where courts perceive the inquiry as empirical—revolving around actual events, past or future—the inquiry is labeled a question of fact”); Stern, *supra* note 104, at 93 (“Obviously an issue as to whether a particular act occurred . . . is factual.”).

¹¹³ Bohlen, *supra* note 112, at 112; accord *Miller*, 474 U.S. at 113; *Pullman-Standard*, 456 U.S. at 288; Brown, *supra* note 105, at 902; Stern, *supra* note 104, at 93.

¹¹⁴ Childress, *supra* note 104, at 132.

¹¹⁵ *Id.* at 142.

their resolution is generally outcome-determinative.¹¹⁶

Particular ultimate facts may be closer to questions of fact or questions of law.¹¹⁷

Importantly, just because an issue may be classified as one involving an ultimate fact does not necessarily convert that issue into a question of law.¹¹⁸ In the past, many courts automatically treated ultimate facts as questions of law to be reviewed de novo.¹¹⁹ But the Supreme Court has effectively killed this rule.¹²⁰ In *Pullman-Standard v. Swint*, the Court noted:

Rule 52(a) broadly requires that findings of fact not be set aside unless clearly erroneous. It does not make exceptions or purport to exclude certain categories of factual findings from the obligation of a court of appeals to accept a district court's findings unless clearly erroneous. It does not divide facts into categories; in particular *it does not divide findings of fact into those that deal with "ultimate" and those that deal with "subsidiary" facts.*¹²¹

Thus, the doctrine that an ultimate fact is automatically a question of law “is no longer viable—at least where it allows de novo review ‘whenever the result in a case turns on a factual finding.’”¹²²

¹¹⁶ Schwarzer et al., *supra* note 111, at 456–57 (footnote omitted) (citing *Baumgartner v. United States*, 322 U.S. 665, 671 (1944)).

¹¹⁷ Alan K. Chen, *The Burdens of Qualified Immunity: Summary Judgment and the Role of Facts in Constitutional Tort Law*, 47 AM. U. L. REV. 1, 89 (1997) (“Ultimate facts can be more ‘factual’ (e.g., whether a driver recklessly or negligently operated an automobile), or more ‘legal’ (e.g., whether a defamation plaintiff is a public figure for First Amendment purposes).” (citing Schwarzer et al., *supra* note 111, at 457)).

¹¹⁸ See *Pullman-Standard*, 456 U.S. at 287; Childress, *supra* note 104, at 142.

¹¹⁹ Childress, *supra* note 104, at 141–42.

¹²⁰ *Id.* at 142.

¹²¹ 456 U.S. at 287 (emphasis added).

¹²² Childress, *supra* note 104, at 142 (quoting *Pullman-Standard*, 456 U.S. at 286 n.16).

2. Questions of Law

Similarly, some issues are clearly questions of law.¹²³ Such obvious questions of law “are fact-free general principles that are applicable to all, or at least to many, disputes and not simply to the one *sub judice*.”¹²⁴ Thus, a general definition of a question of law “is a statement of a general principle or rule, made in advance of a case, awaiting application to particular facts that may arise.”¹²⁵ Clear questions of law include interpretations of the Constitution¹²⁶ and statutes.¹²⁷ Questions of law also usually include interpreta-

¹²³ *Id.* at 132.

¹²⁴ Casey et al., *supra* note 3, at 317 (quoting Martin B. Louis, *Allocating Adjudicative Decision Making Authority Between the Trial and Appellate Levels: A Unified View of the Scope of Review, the Judge/Jury Question, and Procedural Discretion*, 64 N.C. L. REV. 993, 993 n.3 (1986)).

¹²⁵ *Id.*; see also *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 845 (2015) (Thomas, J., dissenting) (“In general, we have treated district-court determinations . . . as ‘analytically more akin to . . . a legal conclusion’ the more they define rules applicable beyond the parties’ dispute.” (second omission in original)); Bohlen, *supra* note 112, at 112 (“‘Law’ primarily means a body of principles and rules which are capable of being predicated in advance and which are so predicated, awaiting proof of the facts necessary for their application.”); Brown, *supra* note 105, at 904 (“‘Law’ in its best accepted sense refers to precepts generally and uniformly applicable to all persons of like qualities and status and in like circumstances.”); Stern, *supra* note 104, at 94 (“When the issue relates to the existence or nature of a general rule or standard which will be applicable to many cases, it is normally regarded as presenting a question of law.”).

In 1922, one commentator helpfully likened the distinction between questions of law and fact to major and minor premises in a syllogism. See Isaacs, *supra* note 103, at 2. He reasoned:

I refer to the legal reasoning in which propositions of law are contrasted with propositions of fact very much as major premises are contrasted with minor premises, and, in which conclusions are drawn by the very same process. Theoretically, the court knows all of those major premises which constitute the law. The jury is asked to tell the truth with reference to the minor premise, the fact of a particular case. Then the conclusion is supposed to take care of itself.

Id.

¹²⁶ See CHILDRESS & DAVIS, *supra* note 1, § 2.13, at 2-72. In addition to treating constitutional interpretation as a question of law, the Supreme Court also treats fact-finding in constitutional cases under the “law” umbrella. See *id.* § 2.19, at 2-108 (citing *Bose Corp. v. Consumers Union*, 466 U.S. 485 (1984)). Thus, the Court reviews such constitutional-fact issues under the *de novo* standard. *Id.*

¹²⁷ See, e.g., *Chandris, Inc. v. Latsis*, 515 U.S. 347, 369 (1995); *Eli Lilly & Co. v. Teva Pharm. USA, Inc.*, 557 F.3d 1346, 1352 (Fed. Cir. 2009).

tions of written documents, such as contracts and deeds.¹²⁸ Thus, the Supreme Court treats claim construction¹²⁹ as a question of law (though sometimes with factual underpinnings),¹³⁰ likening interpretation of patent claim terms to interpreting written documents in general.¹³¹ In addition to claim construction, the Federal Circuit treats a variety of other patent issues as questions of law¹³²— including, of course, invalidity due to obviousness.¹³³

3. A Functional Approach to Determining Questions of Fact Versus Law

Rather than attempting to formally determine whether a particular thorny issue is more like a question of fact or law to determine how much deference to give a lower court's findings, many appellate courts take a more functional approach.¹³⁴ For so-called “mixed questions of fact and law,” these courts rely on policy considerations, such as whether “one judicial actor is better positioned

¹²⁸ See *Teva*, 135 S. Ct. at 837 (“Construction of written instruments often presents a ‘question solely of law’” (quoting *Great N. Ry. Co. v. Merchs.’ Elevator Co.*, 259 U.S. 285, 291 (1922))).

¹²⁹ For a very brief discussion of claim construction, see *supra* note 17. For a more detailed discussion of claim construction, see generally *Teva*, 135 S. Ct. 831; *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996); MUELLER, *supra* note 17, at 447–65.

¹³⁰ *Teva*, 135 S. Ct. at 838.

¹³¹ *Markman*, 517 U.S. at 388–89; see *Teva*, 135 S. Ct. at 845 (Thomas, J., dissenting).

¹³² See, e.g., *Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782 F.3d 671, 684 (Fed. Cir. 2015) (invalidity for lack of enablement under 35 U.S.C. § 112, ¶ 1); *Eidos Display, LLC v. AU Optronics Corp.*, 779 F.3d 1360, 1364 (Fed. Cir. 2015) (invalidity for indefiniteness under 35 U.S.C. § 112, ¶ 2); *EMD Millipore Corp. v. AllPure Techs., Inc.*, 768 F.3d 1196, 1201 (Fed. Cir. 2014) (application of prosecution history estoppel to infringement under the doctrine of equivalents); *AstraZeneca LP v. Apotex, Inc.*, 633 F.3d 1042, 1064 (Fed. Cir. 2010) (statutory subject matter under 35 U.S.C. § 101); *Georgia-Pac. Corp. v. U.S. Gypsum Co.*, 195 F.3d 1322, 1326 (Fed. Cir. 1999) (double patenting), *amended on reh’g*, 204 F.3d 1359 (Fed. Cir. 2000); *In re Daniels*, 144 F.3d 1452, 1455 (Fed. Cir. 1998) (entitlement to priority under 35 U.S.C. § 120); *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987) (whether a reference qualifies as prior art under 35 U.S.C. § 102).

¹³³ *Panduit*, 810 F.2d at 1566.

¹³⁴ See Childress, *supra* note 104, at 133 (describing the use of a “functional approach” that “focuses on review policy, competency, and uncertainty rather than on some analytic meaning ‘inside’ the words ‘fact’ and ‘law’”); cf. *Miller v. Fenton*, 474 U.S. 104, 113–14 (1985) (describing the determination of law versus fact as “as much a matter of allocation as it is of analysis”).

than another to decide the issue in question.”¹³⁵ Under this approach, if an appellate court believes that an issue is better decided by a judge, then the court treats the issue as a question of law.¹³⁶ But if the appellate court believes that the issue is better decided by a jury, then the court treats the issue as a question of fact.¹³⁷ The Federal Circuit took such a functional approach in *Panduit Corp. v. Dennison Manufacturing Co.*,¹³⁸ in which the court determined that obviousness is a question of law based on factual underpinnings.¹³⁹

Some commentators have criticized this functional approach.¹⁴⁰ They contend that by adopting such an approach, a reviewing court can improperly pick and choose whichever issues it wishes to re-

¹³⁵ *Miller*, 474 U.S. at 114; see *Lough v. Brunswick Corp.*, 103 F.3d 1517, 1521 (Fed. Cir. 1997) (“The ‘magic’ of *de novo* appellate determination . . . serves not to reflect a nuanced definition of law and fact, but to affect trial/appellate authority and . . . the role of the jury.”); Childress, *supra* note 104, at 133; Edward H. Cooper, *Civil Rule 50(a): Rationing and Rationalizing the Resources of Appellate Review*, 63 NOTRE DAME L. REV. 645, 660 (1988) (“Characterization of an issue of law application as fact or law for purposes of identifying a formalized standard of review depends on the perceived need for review, not on the actual status of the issue.”); Isaacs, *supra* note 103, at 7 (“Historically the distinction between law and facts that our courts have made has been based on procedure.”); Kunsch, *supra* note 1, at 23 (“When an issue falls within the blurred area of a mixed question, it might be better to fall back on policy considerations.”).

¹³⁶ Childress, *supra* note 104, at 133.

¹³⁷ *United States v. J.B. Williams Co.*, 498 F.2d 414, 431 (2d Cir. 1974) (Friendly, J.) (“[W]hat a court can determine better than a jury, [is] perhaps about the only satisfactory criterion for distinguishing ‘law’ from ‘fact.’” (citing *Loper v. Morrison*, 145 P.2d 1, 6–7 (Cal. 1944) (Traynor, J., dissenting))); *Loper*, 145 P.2d at 6 (Traynor, J., dissenting) (“As a general rule, . . . the court determines the law and the jury the facts, unless it appears that the issue is one that the jury can determine better than the court.”); Childress, *supra* note 104, at 133 (citing *J.B. Williams*, 498 F.2d at 431); cf. Casey et al., *supra* note 3, at 316 (“Implicit in selecting a standard of review is a crucial policy decision: Whether the trial court . . . or the appellate court . . . is better suited to decide a particular issue in a case.”).

¹³⁸ *Panduit*, 810 F.2d 1561.

¹³⁹ *Id.* at 1566.

¹⁴⁰ See CHILDRESS & DAVIS, *supra* note 1, § 3.09, at 3-71; R. Jack Ayres, Jr., *Judicial Nullification of the Right to Trial by Jury by “Evolving” Standards of Appellate Review*, 60 BAYLOR L. REV. 337, 477–79 (2008); Brown, *supra* note 105, at 900. *But see* Bose Corp. v. Consumers Union, 466 U.S. 485, 501 n.17 (1984) (“Regarding certain largely factual questions in some areas of the law, the stakes—in terms of impact on future cases and future conduct—are too great to entrust them finally to the judgment of the trier of fact.”).

view de novo.¹⁴¹ And the functional approach allows a court to easily but improperly “renam[e] or recharacteriz[e] traditional fact issues . . . as questions of law”¹⁴² Indeed, some commentators have pointed out that courts can use functional determination that a particular issue is a question of law as “an artifice to justify” de novo review of what really should be a factual question reviewed with deference.¹⁴³

Moreover, another reason that the functional approach may be flawed is because the issue of whether to allocate the determination of a particular question to the trial judge or the jury is properly a separate issue from whether to treat that question as a question of law or fact.¹⁴⁴ Indeed, the Supreme Court recently treated the allocation issue and the law-versus-fact issue as two separate concerns in *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, where the Court decided that a judge’s factual findings with respect to the construction of patent claim terms is a question of fact to be reviewed for clear error.¹⁴⁵ The Court had previously held in *Markman v. Westview Instruments, Inc.* that the issue of claim construction must be allocated entirely to the court, not the jury.¹⁴⁶ And the Court in *Markman* made this allocation despite characterizing claim construction as “a mongrel practice” of law and fact.¹⁴⁷

In *Teva*, the Court expressly distinguished the allocation issue from the law-versus-fact issue:

¹⁴¹ See Brown, *supra* note 105, at 900 (“[W]e rather suspect that this seemingly rigid dichotomy of law and fact is only a bit of legalistic mummery designed to conceal from the uninitiated the fact that the courts decide these questions about as they wish.”).

¹⁴² Ayres, *supra* note 140, at 478.

¹⁴³ CHILDRESS & DAVIS, *supra* note 1, § 3.09, at 3-71.

¹⁴⁴ See *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837-38 (2015) (distinguishing the Seventh Amendment issue of whether to allocate claim construction to the court or jury from the issue of what standard of review to apply); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1464-65 (Fed. Cir. 1998) (en banc) (Mayer, C.J., concurring in the judgment) (“[A]ll that *Markman* stands for is that the judge will do the resolving, not the jury. Wisely, the Supreme Court stopped short of authorizing us to find facts *de novo* when evidentiary disputes exist as part of the construction of a patent claim” (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996))).

¹⁴⁵ 135 S. Ct. at 835.

¹⁴⁶ 517 U.S. 370, 372 (1996).

¹⁴⁷ *Id.* at 378.

Our opinion in *Markman* neither created, nor argued for, an exception to Rule 52(a). The question presented in that case was a Seventh Amendment question: Should a jury or a judge construe patent claims? . . .

When describing claim construction we concluded that it was proper to treat the ultimate question of the proper construction of the patent as a question of law in the way that we treat document construction as a question of law. But this does not imply an exception to Rule 52(a) for underlying factual disputes

Accordingly, when we held in *Markman* that the ultimate question of claim construction is for the judge and not the jury, we did not create an exception from the ordinary rule governing appellate review of factual matters A conclusion that an issue is for the judge does not indicate that Rule 52(a) is inapplicable.¹⁴⁸

Thus, an appellate court can properly determine whether to allocate an issue to the judge versus the jury and separately decide whether the question is truly of law or fact regardless of the result of the allocation decision. Therefore, which standard of review to apply to a question should not depend upon whether the question is allocated to the judge or jury.

II. INVALIDITY OF PATENT CLAIMS BASED UPON THE PRIOR ART

In a patent-infringement suit, an accused infringer can raise the affirmative defense of invalidity.¹⁴⁹ In bringing an invalidity defense, the accused infringer asserts that one or more of the asserted patent claims are invalid for failure to satisfy any of the patentability requirements.¹⁵⁰ Two of these requirements are based on the

¹⁴⁸ *Teva*, 135 S. Ct. at 837–38 (citations omitted).

¹⁴⁹ See 35 U.S.C. § 282(b)(2)–(3) (2012).

¹⁵⁰ MUELLER, *supra* note 17, at 582.

prior art:¹⁵¹ novelty¹⁵² and nonobviousness.¹⁵³ This Part provides an overview of these two requirements. Section I.A discusses anticipation—i.e., failure to meet the novelty requirement of 35 U.S.C. § 102. Section I.B examines obviousness—i.e., failure to meet the nonobviousness requirement of 35 U.S.C. § 103. And Section I.C considers the Federal Circuit’s reasoning in categorizing the ultimate issue of obviousness as a question of law to be reviewed de novo.

A. Anticipation

A patent claim is invalid for anticipation where it fails to satisfy the novelty requirement of 35 U.S.C. § 102.¹⁵⁴ In other words, a claimed invention must be new.¹⁵⁵ And if an accused infringer successfully argues that the invention was not new, then the claimed invention is invalid for anticipation.¹⁵⁶ Anticipation requires “strict identity” between a single prior reference and the claimed invention,¹⁵⁷ which means that a prior-art reference anticipates a claim only where that reference alone discloses each and every limitation of the claim.¹⁵⁸ In an infringement litigation where an accused infringer brings a defense of invalidity for anticipation, a presumption exists that an issued patent claim is valid.¹⁵⁹ Therefore, an accused infringer must prove that a claim is invalid by clear and convincing evidence.¹⁶⁰

A typical example of anticipation occurred in *Krippelz v. Ford Motor Co.*,¹⁶¹ a case about a patent covering a type of emergency

¹⁵¹ “Prior art” is a “[g]eneral term for the categories of prior technology or events against which the patentability of a claimed invention is evaluated.” *Id.* at 708. “What qualifies as prior art . . . for purposes of novelty is cataloged by the various subcategories of 35 U.S.C. § 102.” *Id.*

¹⁵² See 35 U.S.C. § 102 (2012).

¹⁵³ See *id.* § 103.

¹⁵⁴ 1-3 DONALD S. CHISUM, CHISUM ON PATENTS: A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY AND INFRINGEMENT § 3.01 (2016).

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ MUELLER, *supra* note 17, at 697 (defining “anticipation”).

¹⁵⁸ See, e.g., *Krippelz v. Ford Motor Co.*, 667 F.3d 1261, 1265 (Fed. Cir. 2012).

¹⁵⁹ 35 U.S.C. § 282(a) (2012).

¹⁶⁰ *Microsoft Corp. v. i4i Ltd. P’ship*, 564 U.S. 91, 95 (2011); see also, e.g., *Krippelz*, 667 F.3d at 1265.

¹⁶¹ *Krippelz*, 667 F.3d 1261.

light used in automobiles.¹⁶² At issue was the second claim, which read in relevant part:

An emergency warning light for an automotive vehicle having a window on side thereof, comprising in combination a housing mounted in a fixed, substantially unadjustable position on said vehicle *adjacent to said window*, . . . a source of light mounted within said housing for directing a *conical beam of light* downwardly through said opening¹⁶³

The accused infringer argued that the claim was invalid for anticipation because a French patent from 1953 disclosed all the claim limitations.¹⁶⁴ But a jury found that the claim was not invalid for anticipation, and the district court denied the accused infringer's motion for a judgment as a matter of law.¹⁶⁵ The district court reasoned that a reasonable jury could find that the French patent failed to disclose the "conical beam of light" and "adjacent to the [sic] window" limitations.¹⁶⁶ On appeal, the Federal Circuit reversed on this issue.¹⁶⁷ The Federal Circuit noted that the French patent did indeed disclose both these limitations.¹⁶⁸ Although "the district court cited several varieties of evidence to overcome these disclosures in [the French patent]," the Federal Circuit held that this evidence "was legally insufficient to support a" finding of no anticipation.¹⁶⁹ Thus, the Federal Circuit held that the claim at issue was invalid for anticipation because a single prior-art reference disclosed all limitations of the claim as a matter of law.¹⁷⁰

¹⁶² *Id.* at 1263.

¹⁶³ *Id.* (emphasis added) (quoting U.S. Patent No. 5,017,903 col. 3 l. 19 to col. 4 l. 3 (filed Feb. 21, 1989)).

¹⁶⁴ *Id.* at 1264.

¹⁶⁵ *Id.* at 1264–65.

¹⁶⁶ *Id.* at 1265.

¹⁶⁷ *Id.* at 1270.

¹⁶⁸ *Id.* at 1267, 1269.

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

As the *Krippelz* case illustrates, anticipation is a highly technical issue.¹⁷¹ As such, anticipation is essentially a question of historical fact—whether the prior-art reference in question discloses each and every limitation of the claim at issue.¹⁷² Therefore, the Federal Circuit properly treats anticipation as a question of fact,¹⁷³ reviewed under either the clearly erroneous¹⁷⁴ or substantial-evidence¹⁷⁵ standard, as appropriate.

B. Obviousness

A patent claim is invalid for obviousness where it fails to satisfy the nonobviousness requirement of 35 U.S.C. § 103,¹⁷⁶ which provides:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.¹⁷⁷

¹⁷¹ See *Kori Corp. v. Wilco Marsh Buggies & Draglines, Inc.*, 708 F.2d 151, 154 (5th Cir. 1983) (“The defense of anticipation, derived principally from § 102(a), is strictly technical, requiring a showing of actual identity in the prior art.” (footnote omitted)).

¹⁷² *Krippelz*, 667 F.3d at 1265.

¹⁷³ *Taurus IP, LLC v. DaimlerChrysler Corp.*, 726 F.3d 1306, 1322 (Fed. Cir. 2013).

¹⁷⁴ *Id.*

¹⁷⁵ *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1214 (Fed. Cir. 2014).

¹⁷⁶ See generally *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007); *Graham v. John Deere Co.*, 383 U.S. 1 (1966); 2-5 CHISUM, *supra* note 154, § 5.01.

¹⁷⁷ 35 U.S.C. § 103 (2012). The quoted text of § 103 is that which is currently in force as of the enactment of the Leahy-Smith America Invents Act (“AIA”). The previous version of § 103 remains in effect for patent applications filed before the AIA took effect. 2-5 CHISUM, *supra* note 154, § 5.01. These provisions are almost identical except that the relevant time frame for the old version is “at the time the invention was made,” whereas in the AIA version, the time frame is “before the effective filing date of the claimed invention.” Compare 35 U.S.C. § 103 (2012), with 35 U.S.C. § 103 (2006). Additional stylistic differences also exist, but these differences do not affect the meaning of the statute.

Unlike anticipation, a claim may be invalid for obviousness even if no single prior-art reference discloses the claimed invention.¹⁷⁸

Importantly, whether a claim is invalid for obviousness is an objective inquiry.¹⁷⁹ The inquiry is not whether a claimed invention *is subjectively* obvious to the inventor or a particular judge, jury, or expert witness;¹⁸⁰ instead, the question is whether the claimed invention *would have been* obvious to a hypothetical “person having ordinary skill in the art to which the claimed invention pertains” (“PHOSITA”).¹⁸¹ This hypothetical PHOSITA is analogous to the reasonably prudent person used in applying the objective standard for duty of care in negligence law.¹⁸²

In 1966, in *Graham v. John Deere Co. of Kansas City*, the Supreme Court provided the framework for determining the question of obviousness under § 103.¹⁸³ And in the 2007 case *KSR International Co. v. Teleflex Inc.*, the Supreme Court reaffirmed that courts today must continue to use this framework in analyzing obviousness.¹⁸⁴ Using the *Graham* framework, a court must proceed as follows:

Under § 103, [1] the scope and content of the prior art are to be determined; [2] differences between the prior art and the claims at issue are to be ascertained; and [3] the level of ordinary skill in the pertinent art resolved. Against this background, the ob-

¹⁷⁸ 2-5 CHISUM, *supra* note 154, § 5.01.

¹⁷⁹ *KSR*, 550 U.S. at 406.

¹⁸⁰ *Life Techs., Inc. v. Clontech Lab., Inc.*, 224 F.3d 1320, 1325 (Fed. Cir. 2000) (“Because patentability is assessed from the perspective of the hypothetical person of ordinary skill in the art, information regarding the subjective motivations of inventors is not material.”); 2-5 CHISUM, *supra* note 154, § 5.04 (“We do not measure the knowledge of any particular person, or any particular expert who might testify in the case, but, rather, we measure the knowledge of a hypothetical person skilled in the art, who has thought about the subject matter of the patented invention in the light of that art.” (quoting *Flour City Architectural Metals v. Alpana Aluminum Prods., Inc.*, 454 F.2d 98, 107–08 (8th Cir. 1972))).

¹⁸¹ 35 U.S.C. § 103 (2012); *see* 2-5 CHISUM, *supra* note 154, § 5.04.

¹⁸² 2-5 CHISUM, *supra* note 154, § 5.04 (citing *Nickola v. Peterson*, 580 F.2d 898, 911 (6th Cir. 1978)).

¹⁸³ 383 U.S. 1, 17–18 (1966).

¹⁸⁴ 550 U.S. 398, 406 (2007) (citing *Graham*, 383 U.S. at 15–18).

viousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.¹⁸⁵

Although the Court in *Graham* characterized “the ultimate question of [obviousness] as one of law,”¹⁸⁶ the Court recognized that this framework involves “factual inquiries.”¹⁸⁷

Indeed, the question that arose in *KSR* presents a good example of how a court analyzes the issue of obviousness.¹⁸⁸ The claim at issue in *KSR* covered “a mechanism for combining an electronic sensor with an adjustable automobile pedal so the pedal’s position can be transmitted to a computer that controls the throttle in the vehicle’s engine.”¹⁸⁹ This invention allowed drivers to adjust the position of the accelerator pedal to accommodate drivers of different heights, while at the same time including an electronic—rather than mechanical—sensor for determining the position of the pedal and sending the appropriate signals to a computer-controlled throttle.¹⁹⁰ The claim at issue covered “a position-adjustable pedal assembly with an electronic pedal position sensor attached to the support member of the pedal assembly” in a fixed position.¹⁹¹

The Court applied the *Graham* framework and held that the scope and content of the prior art included a patent issued to Asano, which disclosed an adjustable pedal with a fixed pivot point (albeit with a mechanical—rather than electronic—position sensor), and a patent issued to Smith, which disclosed a pedal with an elec-

¹⁸⁵ *Graham*, 383 U.S. at 17–18.

¹⁸⁶ *Id.* at 17.

¹⁸⁷ *Id.*

¹⁸⁸ *KSR Int’l Co.*, 550 U.S. 398.

¹⁸⁹ *Id.* at 405.

¹⁹⁰ *Id.* at 408–09.

¹⁹¹ *Id.* at 411 (quoting *Teleflex Inc. v. KSR Int’l Co.*, 298 F. Supp. 2d 581, 586–87 (E.D. Mich. 2003), *vacated*, 119 F. App’x 282 (Fed. Cir. 2005), *rev’d*, 550 U.S. 398 (2007)).

tronic sensor mounted in a fixed position on the pedal assembly.¹⁹² The Court then concluded that there was “little difference between the teachings of Asano and Smith and the adjustable electronic pedal disclosed in” the claim at issue.¹⁹³ Indeed, the Court noted that the district court “found that combining Asano with a pivot-mounted pedal position sensor fell within the scope of” the claim at issue.¹⁹⁴ Additionally, the Court agreed with the district court’s finding that the level of ordinary skill in the art was “an undergraduate degree in mechanical engineering (or an equivalent amount of industry experience) [and] familiarity with pedal control systems for vehicles.”¹⁹⁵ From these facts, the Court concluded that the district court correctly held that it would have been “obvious to a person of ordinary skill to combine Asano with a pivot-mounted pedal position sensor.”¹⁹⁶ Therefore, the Court concluded that the claim at issue was invalid for obviousness.¹⁹⁷

C. The Federal Circuit Classifies the Issue of Obviousness as a Question of Law Based on Underlying Facts

The Federal Circuit has repeatedly stated that the ultimate issue of invalidity for obviousness is a question of law based on underlying factual determinations.¹⁹⁸ Thus, the Federal Circuit reviews the ultimate question of obviousness *de novo*.¹⁹⁹ But the court reviews the underlying factual determinations for substantial evidence in a jury trial²⁰⁰ and clear error in a bench trial.²⁰¹

¹⁹² *Id.* at 408–09. The Court noted that the district court had found that the scope and content of the prior art also included other references that disclosed similar adjustable pedals and pedals using electronic sensors in fixed positions. *Id.*

¹⁹³ *Id.* at 422.

¹⁹⁴ *Id.* at 423.

¹⁹⁵ *Id.* at 412–13 (alteration in original) (quoting *Teleflex*, 298 F. Supp. 2d at 590).

¹⁹⁶ *Id.* at 424. The Court noted that a person of ordinary skill in the art “would have seen the benefits” of combining Asano and Smith to achieve the invention of the claim at issue. *Id.* at 422.

¹⁹⁷ *Id.* at 427.

¹⁹⁸ *See, e.g.*, *Soverain Software LLC v. Newegg Inc.*, 705 F.3d 1333, 1336 (Fed. Cir. 2013), *amended by* 728 F.3d 1332 (Fed. Cir. 2013); *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566 (Fed. Cir. 1987).

¹⁹⁹ *See Panduit*, 810 F.2d at 1565–66.

²⁰⁰ *See Sanofi-Aventis Deutschland GmbH v. Glenmark Pharm. Inc., USA*, 748 F.3d 1354, 1358 (Fed. Cir. 2014).

The Federal Circuit confronted the issue of whether the ultimate question of obviousness is one of law or fact in 1987 in *Panduit Corp. v. Dennison Manufacturing Co.*²⁰² In *Panduit*, after a bench trial, the district court issued a judgment that the relevant patent claims were invalid for obviousness.²⁰³ On appeal, the Federal Circuit reversed the district court's judgment and held that the claims were not invalid.²⁰⁴ The Supreme Court then granted the accused infringer's petition for a writ of certiorari²⁰⁵ based on the argument that "the Federal Circuit ignored Federal Rule of Civil Procedure 52(a) in substituting its view of factual issues for that of the [d]istrict [c]ourt."²⁰⁶ The Court criticized the Federal Circuit for failing to even "mention Rule 52(a)," failing to "explicitly apply the clearly-erroneous standard to any of the [d]istrict [c]ourt's findings on obviousness," and failing to "explain why, if it was of that view, Rule 52(a) had no applicability to this issue."²⁰⁷ The Court noted that it "lacked the benefit of the Federal Circuit's informed opinion on the complex issue of the degree to which the obviousness determination is one of fact."²⁰⁸ Thus, the Court vacated the Federal Circuit's original opinion and remanded the case to the Federal Circuit "for further consideration in light of Rule 52(a)."²⁰⁹

On remand, the Federal Circuit again reversed the district court's holding that the relevant claims were invalid for obviousness.²¹⁰ In an opinion written by Chief Judge Markey,²¹¹ the court

²⁰¹ See *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 736 (Fed. Cir. 2013) (citing *Winner Int'l Realty Corp. v. Wang*, 202 F.3d 1340, 1344–45 (Fed. Cir. 2000)).

²⁰² 810 F.2d 1561 (Fed. Cir. 1987).

²⁰³ *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 1084 (Fed. Cir. 1985), *vacated*, 475 U.S. 809 (1986).

²⁰⁴ *Id.*

²⁰⁵ *Dennison Mfg. Co. v. Panduit Corp.*, 475 U.S. 809, 811 (1986) (per curiam).

²⁰⁶ *Id.* at 810. Rule 52(a) provides that courts of appeal must give deference to the fact findings of district courts: "Findings of fact, whether based on oral or other evidence, must not be set aside unless clearly erroneous, and the reviewing court must give due regard to the trial court's opportunity to judge the witnesses' credibility." FED. R. CIV. P. 52(a)(6).

²⁰⁷ *Panduit*, 475 U.S. at 811.

²⁰⁸ *Id.*

²⁰⁹ *Id.*

²¹⁰ *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1564 (Fed. Cir. 1987).

analyzed in detail whether the obviousness determination under § 103 is one of fact or law.²¹² The court began by noting that this determination involves issues of both fact and law.²¹³ The court gave examples of the types of facts that may be involved in the analysis:

[1] what a prior art patent as a whole discloses; [2] what it in fact disclosed to workers in the art; [3] what differences exist between the entire prior art, or a whole prior art structure, and the whole claimed invention; [4] what the differences enabled the claimed subject matter as a whole to achieve; [5] that others for years sought and failed to arrive at the claimed invention; [6] that one of those others copied it; [7] that the invention met on its merits with outstanding commercial success.²¹⁴

The court held that it must defer to the findings of the district court concerning these facts, reversing such findings only if they are clearly erroneous under Rule 52(a).²¹⁵

²¹¹ The late Chief Judge Howard T. Markey was a well-respected leader in patent law. See generally Paul R. Michel, *A Memoir of the First Chief Judge by the Fifth Chief Judge*, 6 J. MARSHALL REV. INTELL. PROP. L. 310 (2007); Antonin Scalia, *The Legacy of Judge Howard T. Markey*, 8 J. MARSHALL REV. INTELL. PROP. L. (SPECIAL ISSUE) 1 (2009). After a distinguished career as a patent practitioner and then a judge on the Court of Customs and Patent Appeals, he was selected to be the first chief judge of the Federal Circuit. Michel, *supra*, at 310. He was an “extremely active jurist, sitting in over 5,000 cases on the Court of Customs and Patent Appeals and the Federal Circuit and sitting as a visiting judge in over 1,400 cases, both civil and criminal, in every one of the Regional Circuit Courts.” Scalia, *supra*, at 1 (footnotes omitted). And “[h]e authored over 1,000 opinions, numerous articles on the law and delivered countless speeches and lectures.” *Id.* (footnotes omitted).

²¹² See *Panduit*, 810 F.2d at 1566–68.

²¹³ *Id.* at 1566.

²¹⁴ *Id.* These facts are a detailed description of those that the Supreme Court outlined in *Graham v. John Deere*. For a brief discussion of these so-called *Graham* factors, see *supra* text accompanying notes 183–87.

²¹⁵ See *Panduit*, 810 F.2d at 1569. The court stated:

Rule 52(a) is applicable to all findings on the four inquiries listed in *Graham*: scope and content of prior art; differences between prior art and claimed invention; level of skill; and objective evidence (secondary considerations). The last may include: commercial success due to the invention; failure of others; long felt need; movement of the skilled in a different direction; skepticism of

But as far as the ultimate conclusion of obviousness or nonobviousness, the Federal Circuit held that this question is one of law.²¹⁶ The question to be answered in this analysis is whether the claimed invention would have been obvious to a hypothetical PHOSITA.²¹⁷ Likening this hypothetical PHOSITA to the reasonably prudent person used in negligence law,²¹⁸ the court reasoned that this question is one of law:

To reach a proper conclusion under § 103, the [decision maker] must step backward in time and into the shoes worn by that “person” when the invention was unknown and just before it was made. In light of *all* the evidence, the [decision maker] must then determine whether the patent challenger has convincingly established that the claimed invention as a whole would have been obvious at *that* time to *that* person.²¹⁹

The court concluded that “[t]he answer to that question partakes more of the nature of law than of fact, for it is an ultimate conclusion based on a foundation formed of all the probative facts.”²²⁰

The Federal Circuit took a functional approach in determining whether the ultimate question of obviousness should be a question of law or fact.²²¹ The court analyzed such “functional factors, including the decisional process, a literal impression in which the inquiry ‘partakes’ more of law, drawn from facts, and precedent, cit-

experts; copying the invention in preference to the prior art; and other events proved to have actually happened in the real world (hence the description “objective”).

Id. (citations omitted).

²¹⁶ *Id.* at 1566–67.

²¹⁷ 35 U.S.C. § 103 (2012); *see* *Graham v. John Deere Co.*, 383 U.S. 1, 14 (1966) (“Patentability is to depend . . . upon the non-obvious nature of the subject matter sought to be patented to a person having ordinary skill in the pertinent art.” (internal quotation marks omitted)).

²¹⁸ *See Panduit*, 810 F.2d at 1566 (“With the involved facts determined, the [decision maker] confronts a ghost, i.e., ‘a person having ordinary skill in the art,’ not unlike the ‘reasonable man’ and other ghosts in the law.”).

²¹⁹ *Id.* (citations and footnote omitted).

²²⁰ *Id.*

²²¹ *Casey et al.*, *supra* note 3, at 320.

ing the circuits and scholars and analyzing previous Supreme Court dicta.”²²² Importantly, the court reasoned that treating the obviousness inquiry as a question of law would “facilitate a consistent application of that statute in the courts and in the Patent and Trademark Office [‘PTO’].”²²³ The court ultimately held that the issue of obviousness is a question of law subject to factual underpinnings.²²⁴

III. THE ULTIMATE QUESTION OF OBVIOUSNESS SHOULD PROPERLY BE A QUESTION OF FACT AND REVIEWED BY THE FEDERAL CIRCUIT WITH DEFERENCE

The Federal Circuit was incorrect in *Panduit*²²⁵ in holding that the ultimate issue of obviousness should be treated as a question of law. Instead, this issue should be treated as a question of fact. This Part considers the reasons why. Section I.A begins by analyzing why the Federal Circuit’s reasoning in *Panduit* was flawed. Next, Section I.B discusses how the Supreme Court’s statement in *Graham* that the ultimate question of obviousness is one of law is not properly supported by precedent. Section I.C considers how treating obviousness as a question of law is inconsistent with how the Federal Circuit treats anticipation and infringement. Finally, Section I.D concludes that even though obviousness is supposed to be a question of law, district courts nonetheless treat the issue as a de facto question of fact.

A. *The Federal Circuit’s Reasoning in Panduit that the Ultimate Question of Obviousness Is a Question of Law Is Flawed*

The Federal Circuit’s reasoning in *Panduit*²²⁶ that the ultimate question of obviousness is a question of law is flawed.²²⁷ The

²²² *Id.*

²²³ *Panduit*, 810 F.2d at 1567; Casey et al., *supra* note 3, at 320 (quoting *Panduit*, 810 F.2d at 1567).

²²⁴ *Panduit*, 810 F.2d at 1566; Casey et al., *supra* note 3, at 320 (citing *Panduit*, 810 F.2d at 1566).

²²⁵ *Panduit*, 810 F.2d 1561.

²²⁶ *Id.* at 1566–67.

²²⁷ For a discussion of the Federal Circuit’s reasoning in the *Panduit* case, see *supra* Section I.C. In addition to holding that the ultimate question of obviousness is a question of law, the Federal Circuit in *Panduit* confirmed that the obviousness determination is

court's first instance of faulty reasoning is in holding that the obviousness "determination engages [the] court in an exercise legal in nature."²²⁸ But the obviousness determination is not legal in nature. To be "legal in nature"²²⁹ under the traditional definition, the issue should involve "fact-free general principles that are applicable to all, or at least to many, disputes and not simply to the one *sub judice*."²³⁰ And such a "legal" issue should be "a statement of a general principle or rule, made in advance of a case, awaiting application to particular facts that may arise."²³¹ But the question of obviousness does not meet either of these definitions. Instead, the question of whether a particular claim in a particular patent is invalid for obviousness affects only that claim and that patent.²³² The determination does not have application beyond the case *sub judice*. It is simply not "an exercise legal in nature."²³³

Moreover, the fact that a determination of invalidity has preclusive effect does not turn obviousness into a question of law. The Supreme Court held in *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation* that whenever a court declares a patent claim to be invalid in an infringement action, that claim is dead to the whole world and cannot be reasserted by the patentee against a different party in a different action.²³⁴ This principle of non-mutual collateral estoppel applies regardless of the grounds for validity—

based on factual underpinnings, which are to be reviewed with deference. *Panduit*, 810 F.2d at 1568–69. This Article does not question this holding, which is plainly correct in the author's opinion.

²²⁸ *Id.* at 1566.

²²⁹ *Id.*

²³⁰ Casey et al., *supra* note 3, at 317 (internal quotation marks omitted) (quoting Louis, *supra* note 124, at 993 n.3).

²³¹ *Id.*; see also *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 845 (2015) (Thomas, J., dissenting); Bohlen, *supra* note 112, at 112; Brown, *supra* note 105, at 904; Stern, *supra* note 104, at 94.

²³² See 35 U.S.C. § 282(a) (2012) ("Each claim of a patent . . . shall be presumed valid independently of the validity of other claims . . .").

²³³ *Panduit*, 810 F.2d at 1566.

²³⁴ 402 U.S. 313, 350 (1971); see also MUELLER, *supra* note 17, at 581 ("[O]nce a U.S. patent has been declared invalid, it is dead and cannot be resuscitated."). This result follows from the doctrine of non-mutual collateral estoppel, and thus it requires that the patentee "had a full and fair opportunity to litigate" the invalidity issue in question. *Blonder-Tongue*, 402 U.S. at 329.

whether obviousness, anticipation, or anything else.²³⁵ Thus, an argument exists that an obviousness determination is legal in nature because it is “applicable to . . . many[] disputes and not simply to the one *sub judice*.”²³⁶ But many of the grounds for invalidity other than obviousness—such as anticipation—are questions of fact.²³⁷ If the application of the *Blonder-Tongue* collateral-estoppel rule could make obviousness a question of law, then it logically would have to convert all these other grounds for invalidity into questions of law as well.²³⁸ But that result makes no sense. These other grounds for invalidity are questions of fact because they are factual in nature. So the *Blonder-Tongue* rule cannot properly be the reason that obviousness is considered a question of law.

Another example of faulty reasoning in *Panduit* was when the Federal Circuit likened the PHOSITA²³⁹ to the reasonably prudent person used in negligence law.²⁴⁰ The court reasoned that because the obviousness determination is objective and relies on the PHOSITA, whether a claimed invention would have been obvious to a PHOSITA is “more of the nature of law than of fact, for it is an ultimate conclusion based on a foundation formed of all the

²³⁵ See *Miss. Chem. Corp. v. Swift Agric. Chems. Corp.*, 717 F.2d 1374, 1378–79 (Fed. Cir. 1983).

²³⁶ *Casey et al.*, *supra* note 3, at 317 (internal quotation marks omitted) (quoting *Louis*, *supra* note 124, at 993 n.3).

²³⁷ See *Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782 F.3d 671, 682 (Fed. Cir. 2015) (“Whether a patent claim is supported by an adequate written description is a question of fact.” (quoting *AbbVie Deutschland GmbH & Co., KG v. Janssen Biotech, Inc.*, 759 F.3d 1285, 1297 (Fed. Cir. 2014))); *Taurus IP, LLC v. DaimlerChrysler Corp.*, 726 F.3d 1306, 1322 (Fed. Cir. 2013) (“Anticipation is a question of fact, and a district court’s finding on this issue is reviewed for clear error.”); *PHG Techs., LLC v. St. John Cos.*, 469 F.3d 1361, 1365 (Fed. Cir. 2006) (“Whether a patented design is functional or ornamental is a question of fact.”); *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1344 (Fed. Cir. 2003) (“This court reviews a finding of derivation as a question of fact.”); *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1359 (Fed. Cir. 1999) (“Utility is a factual issue, which we review for clear error.”).

²³⁸ Indeed, such a rule would logically have to convert any issue that might have a preclusive effect under collateral estoppel into a question of law.

²³⁹ See 35 U.S.C. § 103 (2012).

²⁴⁰ See *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566 (Fed. Cir. 1987) (“With the involved facts determined, the [decision maker] confronts a ghost, i.e., ‘a person having ordinary skill in the art,’ not unlike the ‘reasonable man’ and other ghosts in the law.”).

probative facts.”²⁴¹ This reason is faulty for at least two reasons: (1) negligence is a question of fact, not a question of law; and (2) just because obviousness—like negligence—is an “ultimate fact,” does not mean that courts must treat obviousness as a question of law.

First, negligence is not a question of law—courts generally treat negligence as a question of fact.²⁴² Thus, if the Federal Circuit wishes to analogize the obviousness determination to the negligence determination,²⁴³ then it must treat the obviousness determination as a question of fact.

Second, although the issue of obviousness—like negligence—is an “ultimate fact,”²⁴⁴ such an ultimate fact is not automatically a question of law.²⁴⁵ In a negligence cause of action, the issue of whether the defendant engaged in negligent conduct is a question of ultimate fact.²⁴⁶ And this ultimate fact “reduces to a series of purely factual determinations.”²⁴⁷ Such determinations include “a determination of the burden of precautions, the magnitude of the injury, the likelihood that the injury would occur if the defendant failed to take the precautions, and the relation among these variables, all of which are factual, and their relation to each other likewise.”²⁴⁸

Similarly, the obviousness determination is an ultimate fact.²⁴⁹ It embodies the “ultimate issue for resolution,”²⁵⁰ “implies the

²⁴¹ *Id.*

²⁴² *Cooter & Gell v. Hartmarx Corp.*, 496 U.S. 384, 402 (1990); *Thomas v. Gen. Motors Acceptance Corp.*, 288 F.3d 305, 307–08 (7th Cir. 2002); *CHILDRESS & DAVIS*, *supra* note 1, § 2.28, at 2-173; *Chen*, *supra* note 117, at 89; *Childress*, *supra* note 104, at 186; *Jens H. Hillen*, Note, *The Court of Appeals for the Federal Circuit: Independent Review of Patent Decisions and the Constitutional Facts Doctrine*, 67 S. CAL. L. REV. 187, 196 n.45 (1993); *cf.* *United States v. Ford Motor Co.*, 463 F.3d 1286, 1292 (Fed. Cir. 2006) (“Because a determination of gross negligence involves a determination of intent, it is an issue of fact, not law.”).

²⁴³ Indeed, this analogy is a good one, in the author’s opinion.

²⁴⁴ *See United States v. Esnault-Pelterie*, 299 U.S. 201, 205 (1936) (“*Validity and infringement are ultimate facts on which depends the question of liability.*” (emphasis added)). For a discussion of ultimate facts, see *supra* notes 114–21 and accompanying text.

²⁴⁵ *Pullman-Standard v. Swint*, 456 U.S. 273, 287 (1982).

²⁴⁶ *Thomas*, 288 F.3d at 308.

²⁴⁷ *Id.*

²⁴⁸ *Id.*

²⁴⁹ *See Esnault-Pelterie*, 299 U.S. at 205.

application of standards of law,”²⁵¹ involves the “characterization of historical facts,”²⁵² is “outcome-determinative,”²⁵³ and—just like the negligence determination—“reduces to a series of purely factual determinations.”²⁵⁴ These factual determinations²⁵⁵ are analogous to the factual determinations involved in the issue of negligent conduct. But this reasoning runs counter to the Federal Circuit’s assertion in *Panduit* that if the obviousness determination is “itself a fact, it would be part of its own foundation.”²⁵⁶ Therefore, contrary to the Federal Circuit’s holding that the obviousness determination is a question of law based on factual underpinnings,²⁵⁷ the obviousness determination is really an ultimate fact that incorporates “a series of purely factual determinations”²⁵⁸—just like the negligence determination.²⁵⁹ And, like the negligence determination, the obviousness determination should be a question of fact.²⁶⁰

²⁵⁰ Childress, *supra* note 104, at 142 (quoting *East v. Romine, Inc.*, 518 F.2d 332, 339 (5th Cir. 1975)).

²⁵¹ Schwarzer et al., *supra* note 111, at 456–57.

²⁵² *Id.* (emphasis omitted).

²⁵³ *Id.*

²⁵⁴ *Thomas*, 288 F.3d at 308.

²⁵⁵ These factual determinations include:

[1] what a prior art patent as a whole discloses; [2] what it in fact disclosed to workers in the art; [3] what differences exist between the entire prior art, or a whole prior art structure, and the whole claimed invention; [4] what the differences enabled the claimed subject matter as a whole to achieve; [5] that others for years sought and failed to arrive at the claimed invention; [6] that one of those others copied it; [7] that the invention met on its merits with outstanding commercial success.

Panduit v. Dennison Mfg. Co., 810 F.2d 1561, 1566 (Fed. Cir. 1987).

²⁵⁶ *Id.*

²⁵⁷ *Id.*

²⁵⁸ *Thomas*, 288 F.3d at 308.

²⁵⁹ *See id.*; Hillen, *supra* note 242, at 196 n.45 (noting that the Federal Circuit has made the “opposite choice” from negligence law in holding that the ultimate question of obviousness is a question of law “where the distinction between foundational facts and ultimate conclusions so closely parallels the analogous tort doctrine”).

²⁶⁰ *See* Beutler, *supra* note 49, at 466 (noting the argument that “patent law should be treated no differently than any other area of the law and that to limit a jury’s role in the legal question of obviousness is inappropriate, since there is no reason to limit a jury’s participation in questions of law outside the patent realm”).

Finally, the Federal Circuit incorrectly reasoned that obviousness should be a question of law to “facilitate a consistent application of that statute in the courts and in the Patent and Trademark Office.”²⁶¹ First, treating obviousness as a question of law would not lead to a consistent application of obviousness law in the courts. Courts are no more experts at making an obviousness determination than juries. Typical district-court judges—like typical jurors—do not have an engineering or science background. And even most of the judges of the Federal Circuit do not have engineering or science backgrounds.²⁶² Therefore, leaving the decision of obviousness to the Federal Circuit does not necessarily promote uniformity among courts. Moreover, any time the Federal Circuit holds that a patent claim is invalid for obviousness under a de novo standard of review, the court necessarily disagrees with the determination of the Patent Office that the claim in question was patentable. Thus, treating the ultimate issue of obviousness as a question of law does nothing to “facilitate a consistent application of [the obviousness] statute . . . in the Patent and Trademark Office” either.²⁶³

B. The Supreme Court’s Statement in Graham that the Ultimate Question of Obviousness Is One of Law Is Not Properly Supported by Precedent

In holding that the ultimate question of obviousness is a question of law, the Federal Circuit relied on the Supreme Court’s treatment of the issue as a question of law in *Graham v. John Deere Co. of Kansas City*.²⁶⁴ But the Supreme Court’s conclusion in *Graham* is merely a conclusory statement that rests on shaky

²⁶¹ *Panduit*, 810 F.2d at 1567; Casey et al., *supra* note 3, at 320 (quoting *Panduit*, 810 F.2d at 1567); see also Hillen, *supra* note 242, at 216–17 (arguing that the Federal Circuit should review obviousness with no deference to help promote consistency in patent law).

²⁶² See Field, *Hyperactive Judges*, *supra* note 15, at 647 n.125.

²⁶³ *Panduit*, 810 F.2d at 1567.

²⁶⁴ 383 U.S. 1 (1966); *Panduit*, 810 F.2d at 1567. In *Panduit*, the Federal Circuit further noted that this statement was consistent with the Court’s answer to the obviousness question in *Graham* “because the validity issue in *Graham* turned on that answer and because [the Court] disagreed with conclusions reached below, did not remand, described no finding as ‘clearly erroneous,’ and did not mention Rule 52(a).” *Panduit*, 810 F.2d at 1567.

precedent.²⁶⁵ In *Graham*, the Court stated that “the ultimate question of patent validity is one of law,” citing a 1950 case, *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, as supporting authority.²⁶⁶ But this citation was not to the controlling majority opinion of *Great Atlantic & Pacific Tea Co.*; instead, the Court cited Justice Douglas’s concurring opinion without even identifying it as such.²⁶⁷ And because it is a concurring opinion, it does not have the precedential value that a majority opinion has.²⁶⁸

Moreover, even if the concurring opinion in *Great Atlantic & Pacific Tea Co.* had any precedential value, it would still be weak precedent.²⁶⁹ The sentence of *Great Atlantic & Pacific Tea Co.* that the Court cited in *Graham* states: “The standard of patentability is a constitutional standard; and the question of validity of a patent is a question of law.”²⁷⁰ In his concurrence, Justice Douglas cited only one authority to support this statement: *Mahn v. Harwood*.²⁷¹ But *Mahn* fails to support Justice Douglas’s proposition that invalidity for obviousness is a question of law because the issue decided in *Mahn* was quite different than the issue decided in *Great Atlantic & Pacific Tea Co.*²⁷²

²⁶⁵ See Bradley G. Lane, Note, *A Proposal to View Patent Claim Nonobviousness from the Policy Perspective of Federal Rule of Civil Procedure 52(A)*, 20 U. MICH. J.L. REFORM 1157, 1169–72 (1987) (characterizing the precedent that underlies the Supreme Court’s statement in *Graham* that invalidity is a question of law as “very weak”).

²⁶⁶ *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966) (citing *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 155 (1950) (Douglas, J., concurring)).

²⁶⁷ *Id.*

²⁶⁸ See 21 C.J.S. *Courts* § 189 (2016) (“A concurring opinion, while persuasive, is not binding, and does not constitute authority under the doctrine of stare decisis, or have any precedential value.” (footnotes omitted)).

²⁶⁹ See Lane, *supra* note 265, at 1170–71 (criticizing Justice Douglas’s reliance on *Mahn v. Harwood* for the proposition that an appellate court owes no deference to a district court’s conclusion on obviousness).

²⁷⁰ *Great Atl. & Pac. Tea Co.*, 340 U.S. at 155 (Douglas, J., concurring).

²⁷¹ *Id.* (citing *Mahn v. Harwood*, 112 U.S. 354, 358 (1884)).

²⁷² See Lane, *supra* note 265, at 1171 (describing how “*Mahn* stands for the proposition that the federal district courts may adjudicate the validity of issued and reissued patents in an infringement action free of the factual determinations made by a patent examiner” rather than the standard of review an appellate court should apply when reviewing a district court’s conclusion on invalidity for obviousness).

In *Mahn*, obviousness was not at issue—what was at issue was the validity of a reissue patent²⁷³ in which the claims were broadened.²⁷⁴ The Court affirmed the circuit court’s holding that the reissue claims were invalid.²⁷⁵ The Court reasoned that laches applied because the patentee waited too long to apply for a broadened reissue patent.²⁷⁶ In reaching this decision, the Court held:

[T]he question whether the application for correction and reissue is or is not made within reasonable time is, in *most*, if not all, of such cases, a question which the court can determine as a question of law by comparing the patent itself with the original patent, and, if necessary, with the record of its inception.²⁷⁷

This issue is quite different than obviousness, so the holding of *Mahn* fails to support Justice Douglas’s assertion that obviousness must be a question of law.²⁷⁸

And even if the issues in *Mahn* and *Great Atlantic & Pacific Tea Co.* were similar enough to compel the same conclusion—i.e., that because the application of laches to a reissue patent was a question

²⁷³ The process of having a patent reissued allows a patentee “to correct a patent that is . . . wholly or partly inoperative or invalid.” 4A-15 CHISUM, *supra* note 154, § 15.01. Under today’s law, one way in which a patent can be defective is if the claims are too narrow, thus “failing to protect the full scope of the invention.” *Id.* And today’s law freely permits such a broadening reissue if it meets all the other requirements and is applied for within two years of the original issue date. 35 U.S.C. § 251(d) (2012). But, in 1884, when *Mahn* was decided, “a long series of Supreme Court decisions [had] placed limits on reissues that broadened the scope of the original claims.” 4A-15 CHISUM, *supra* note 154, § 15.02. Indeed, the law at the time that *Mahn* was decided allowed a broadening reissue only if the patentee filed the reissue application without any significant delay such that the defense of laches would not apply. *Miller v. Brass Co.*, 104 U.S. 350, 356 (1881) (“But in reference to reissues made for the purpose of enlarging the scope of the patent, the rule of laches should be strictly applied; and no one should be relieved who has slept upon his rights, and has thus led the public to rely on the implied disclaimer involved in the terms of the original patent.”).

²⁷⁴ *Mahn*, 112 U.S. at 357 (“[T]he only object of the reissue was to enlarge the claims . . . Nothing was altered, nothing was changed, but to multiply the claims and to make them broader.”).

²⁷⁵ *Id.* at 363–64.

²⁷⁶ *Id.*

²⁷⁷ *Id.* at 360 (emphasis added).

²⁷⁸ *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 155 (1950) (Douglas, J., concurring).

of law, obviousness must also be a question of law—this holding also does not support Justice Douglas’s assertion. The *Mahn* holding is merely that the Court could decide that particular case as a matter of law—not that it could decide all cases involving laches and reissue applications as a matter of law.²⁷⁹ Thus, the Court’s holding really was that the laches issue in *Mahn* was a question of law because the facts were not in dispute.²⁸⁰ Today, this case would allow a court to issue summary judgment²⁸¹ or a judgment as a matter of law²⁸² because the facts were not in dispute and no reasonable juror could hold otherwise.

But Justice Douglas did not actually cite this holding; instead, he cited the following dictum²⁸³ from *Mahn*:

In cases of patents for inventions, a valid defense . . . often arises where the question is whether the thing patented amounts to a patentable invention.²⁸⁴ *This being a question of law*, the courts are *not bound by the decision of the commissioner*, although he must necessarily pass upon it.²⁸⁵

This statement does not support Justice Douglas’s assertion that in reviewing a trial court’s holding in an infringement lawsuit, validity is a question of law. Instead, this statement in *Mahn* merely means that a trial court may review a patentability determination of the PTO without deference to the Office’s factual findings.²⁸⁶

²⁷⁹ See *Mahn*, 112 U.S. at 360 (holding that this issue could be decided as a question of law “in most, if not all, of such cases” (emphasis added)).

²⁸⁰ In other words, this case would allow a court today to issue summary judgment, see FED. R. CIV. P. 56, or a judgment as a matter of law, see FED. R. CIV. P. 50, because the facts were not in dispute.

²⁸¹ See FED. R. CIV. P. 56.

²⁸² See FED. R. CIV. P. 50.

²⁸³ Lane, *supra* note 265, at 1171 (“[T]he portion of *Mahn* cited by Justice Douglas may be dictum.”).

²⁸⁴ This question today would be called one of nonobviousness. See *Graham v. John Deere Co.*, 383 U.S. 1, 14 (1966) (describing that before Congress enacted § 103 of the 1952 Patent Act, the analogous test to nonobviousness was the judicially created “invention” requirement (citing S. REP. NO. 82-1979, at 6 (1952); H.R. REP. NO. 82-1923, at 7 (1952), reprinted in 1952 U.S.C.C.A.N. 2394)).

²⁸⁵ *Mahn*, 112 U.S. at 358 (emphasis added), cited in *Great Atl. & Pac. Tea Co., v. Supermarket Equip. Corp.*, 340 U.S. 147, 155 (1950) (Douglas, J., concurring).

²⁸⁶ Lane, *supra* note 265, at 1171 (“*Mahn* stands for the proposition that the federal district courts may adjudicate the validity of issued and reissued patents in an

Thus, the statement that Justice Douglas cited does not support his assertion that patent validity must be a question of law.

Furthermore, at the time that the Supreme Court decided *Graham*, other Supreme Court authority existed that held that validity was a question of fact.²⁸⁷ Indeed, *Mahn* was the only case available that even hinted that validity was a question of law.²⁸⁸ At least three other pre-*Graham* cases stated that validity was a question of fact.²⁸⁹ For example, in 1924, the Court very clearly stated in *Thomson Spot Welder Co. v. Ford Motor Co.* that “[t]he question whether an improvement requires mere mechanical skill or the exercise of the faculty of invention, is *one of fact*; and in an action at law for infringement is to be left to the determination of the jury.”²⁹⁰ Thus, when *Graham* was decided in 1966, the number of cases stating that validity was a question of fact outnumbered those stating that it was a question of law by a ratio of at least three to one.²⁹¹

C. Treating Obviousness as a Question of Law Is Inconsistent with How the Federal Circuit Treats Anticipation and Infringement

Treating obviousness as a question of law is inconsistent with how the Federal Circuit treats two related doctrines: anticipation and infringement. The court treats the ultimate question of whether a patent claim is invalid for anticipation²⁹² as a question of

infringement action free of the factual determinations made by a patent examiner.” (footnotes omitted)). This principle of law is the same today. *Id.* (citing *Lindeman Maschinenfabrik GmbH v. Am. Hoist & Derrick, Co.*, 730 F.2d 1452, 1460 n.5 (Fed. Cir. 1984)).

²⁸⁷ *Id.* at 1170 n.77.

²⁸⁸ *Id.* at 1170.

²⁸⁹ *Id.* at 1170 n.77; see *Dow Chem. Co. v. Halliburton Oil Well Cementing Co.*, 324 U.S. 320, 322 (1945) (“The conflicting views of the appellate courts concerning the validity of the . . . patent led us to grant certiorari in this case, and oblige us to decide independently the *factual issue of validity*.” (emphasis added) (citation omitted)); *United States v. Esnault-Pelterie*, 299 U.S. 201, 205 (1936) (“*Validity* and infringement are ultimate *facts* on which depends the question of liability.” (emphasis added)); *Thomson Spot Welder Co. v. Ford Motor Co.*, 265 U.S. 445, 446 (1924).

²⁹⁰ 265 U.S. at 446 (emphasis added). The issue of “invention” in *Thomson* is analogous to the issue of obviousness today under § 103. See *Graham v. John Deere Co.*, 383 U.S. 1, 14 (1966).

²⁹¹ Lane, *supra* note 265, at 1170 n.77.

²⁹² For a discussion of anticipation, see *supra* Section I.A.

fact.²⁹³ The court also treats infringement—both literal and under the doctrine of equivalents—as a question of fact.²⁹⁴ The obviousness determination is similar, or at least analogous, to the determination of anticipation and infringement, yet the court treats obviousness as a question of law. Section I.C.1 discusses anticipation and obviousness, and Section I.C.2 examines infringement and obviousness.

1. Anticipation and Obviousness

Although anticipation and obviousness are different grounds for invalidating a patent claim,²⁹⁵ they share important similarities such that they should both be treated as questions of fact. Namely, they both involve the determination of what a hypothetical PHOSITA would think.²⁹⁶ Thus, because anticipation is a question of fact, obviousness should likewise be a question of fact.

Anticipation is properly a question of fact because it is essentially a question of historical fact—whether the prior-art reference

²⁹³ See, e.g., *Taurus IP, LLC v. DaimlerChrysler Corp.*, 726 F.3d 1306, 1322 (Fed. Cir. 2013). Courts have treated anticipation as a question of fact since at least the nineteenth century. See *Magin v. Karle*, 150 U.S. 387, 391 (1893) (treating anticipation as a question of fact); *Haines v. McLaughlin*, 135 U.S. 584, 597 (1890) (quoting with approval a jury instruction stating that “[t]he question of anticipation is purely a question of fact, and is exclusively for the jury to determine”).

²⁹⁴ See, e.g., *Cadence Pharm. Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364, 1368 (Fed. Cir. 2015).

²⁹⁵ A determination that a patent claim is invalid for anticipation means that the Patent Office should not have issued the claim because it failed to meet the novelty requirement of 35 U.S.C. § 102. See, e.g., *MUELLER*, *supra* note 17, at 697 (defining “anticipation”); *id.* at 706 (defining “novelty”). But a determination that a claim is invalid for obviousness means that the Patent Office should not have issued the claim because it failed to meet the nonobviousness requirement of § 103. See, e.g., *id.* (defining “nonobviousness”). For a discussion of anticipation and obviousness, see *supra* Sections I.A–B.

²⁹⁶ Compare *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000) (“[I]nvalidity by anticipation requires that the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.” (emphasis added)), with *Senju Pharm. Co. v. Lupin Ltd.*, 780 F.3d 1337, 1341 (Fed. Cir. 2015) (“An obviousness inquiry assesses ‘the differences between the subject matter sought to be patented and the prior art’ to ascertain whether ‘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.’” (emphasis added) (quoting 35 U.S.C. § 103(a) (2006))).

in question discloses each and every limitation of the claim at issue.²⁹⁷ Indeed, anticipation is a highly technical issue.²⁹⁸ Therefore, the Federal Circuit properly treats anticipation as a question of fact²⁹⁹ reviewed under either the clearly erroneous³⁰⁰ or substantial-evidence³⁰¹ standard, as appropriate.

In contrast, as discussed above,³⁰² instead of being a “four-corners” type defense like anticipation,³⁰³ the crux of the obviousness analysis is objective and relates to the hypothetical PHOSITA.³⁰⁴ The fact finder must determine obviousness by referring to this PHOSITA and answering the question of whether the claimed invention would have been obvious to a PHOSITA before the effective filing date.³⁰⁵

But anticipation and obviousness are similar in that they both require the fact finder to refer to a hypothetical PHOSITA. In anticipation, the question of whether a patent claim is invalid is whether “the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that *a person of ordinary skill in the art* could practice the invention without undue experimentation.”³⁰⁶ Thus, if anticipation is a question of fact even though it requires the fact finder to make a factual determination as to what a hypothetical PHOSITA would think, then obviousness is not foreclosed from being a question of fact even though it, too, requires the fact finder to make a factual determination as to what a hypothetical PHOSITA would think.

²⁹⁷ Krippelz v. Ford Motor Co., 667 F.3d 1261, 1265 (Fed. Cir. 2012).

²⁹⁸ See Kori Corp. v. Wilco Marsh Buggies & Draglines, Inc., 708 F.2d 151, 154 (5th Cir. 1983) (“The defense of anticipation, derived principally from § 102(a), is strictly technical, requiring a showing of actual identity in the prior art.” (footnote omitted)).

²⁹⁹ Taurus IP, LLC v. DaimlerChrysler Corp., 726 F.3d 1306, 1322 (Fed. Cir. 2013).

³⁰⁰ *Id.*

³⁰¹ Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201, 1214 (Fed. Cir. 2014).

³⁰² See *supra* Section I.B (discussing the issue of invalidity due to obviousness).

³⁰³ See Advanced Display Sys., Inc. v. Kent State Univ., 212 F.3d 1272, 1282 (Fed. Cir. 2000) (“[I]nvalidity by anticipation requires that the four corners of a single, prior art document describe every element of the claimed invention . . .”).

³⁰⁴ 35 U.S.C. § 103 (2012); KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 15–18 (1966)).

³⁰⁵ See *Graham*, 383 U.S. at 17.

³⁰⁶ *Advanced Display*, 212 F.3d at 1282 (emphasis added).

2. Infringement and Obviousness

Parallels exist between infringement³⁰⁷ and obviousness such that because infringement is a question of fact,³⁰⁸ obviousness should also be a question of fact. Determining whether the accused infringer practiced the patentee's actual "patented invention" and thus infringed requires a two-step analysis.³⁰⁹ First, "the court determines the scope and meaning of the patent claims asserted"³¹⁰ Second, the fact finder "compares the claims to the allegedly infringing device[]." ³¹¹ If this comparison reveals that each and every limitation of the claimed invention is met by the accused device, then the device literally infringes the claim in question.³¹²

But even if the accused device does not literally infringe, it nonetheless may infringe under the doctrine of equivalents.³¹³ The existence of the doctrine of equivalents "ensures that the scope of a patent is not limited to its literal terms but instead embraces all equivalents to the claims described."³¹⁴ The Supreme Court originally created the doctrine of equivalents "to prevent competitors from avoiding infringement by making unimportant and insubstantial differences to their technology."³¹⁵ Another important policy rationale supporting the doctrine of equivalents is that claim language may be incapable of "captur[ing] every nuance of the invention or describe[ing] with complete precision the range of its novelty."³¹⁶ To show infringement under the doctrine of equivalents, the

³⁰⁷ Patent infringement occurs when someone "without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention" 35 U.S.C. § 271(a) (2012).

³⁰⁸ See, e.g., *Cadence Pharm. Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364, 1368 (Fed. Cir. 2015).

³⁰⁹ *Grober v. Mako Products, Inc.*, 686 F.3d 1335, 1344 (Fed. Cir. 2012).

³¹⁰ *Id.* (quoting *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998)).

³¹¹ *Id.* (internal quotation marks omitted) (quoting *Cybor*, 138 F.3d at 1454).

³¹² *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1215 (Fed. Cir. 2014).

³¹³ See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 732 (2002).

³¹⁴ Timothy R. Holbrook & Lucas S. Osborn, *Digital Patent Infringement in an Era of 3D Printing*, 48 U.C. DAVIS L. REV. 1319, 1368 (2015) (internal quotation marks omitted) (quoting *Festo*, 535 U.S. at 732).

³¹⁵ *Id.*

³¹⁶ *Festo*, 535 U.S. at 731.

patentee must prove that each and every claim limitation is either “literally or equivalently present in the accused device.”³¹⁷ As mentioned above, both literal infringement and infringement under the doctrine of equivalents are questions of fact.³¹⁸

Determinations of literal infringement and anticipation are mirror images of each other with respect to time. As the maxim goes: “That which would literally infringe if later in time anticipates if earlier than the date of the invention.”³¹⁹ Indeed, the test for anticipation “is the same test as for literal infringement.”³²⁰ For anticipation, the fact finder must look backward from the issue date of the patent and determine whether a reference that came before the patent discloses each and every limitation of the claim at issue.³²¹ And for literal infringement, the fact finder must look forward from the issue date of the patent and determine whether an accused device, composition, method, or manufacture meets each and every limitation of the claim at issue.³²² Because the tests for anticipation

³¹⁷ *Energy Transp. Grp., Inc. v. William Demant Holding A/S*, 697 F.3d 1342, 1352 (Fed. Cir. 2012) (quoting *Sage Prods., Inc. v. Devon Indus., Inc.* 126 F.3d 1420, 1423 (Fed. Cir. 1997)). To show that a limitation is present equivalently, the patentee must prove that the element of the device is insubstantially different from the corresponding claim limitation. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 (1997). The insubstantial-differences test “simply asks whether there is a substantial difference between an element of the patented product and the accused product.” *Holbrook & Osborn*, *supra* note 314, at 1368. And one way in which the patentee can show that the element is insubstantially different is by showing that the element performs substantially the same function, substantially the same way, to achieve substantially the same result as the corresponding claim limitation. *Warner-Jenkinson*, 520 U.S. at 39; *Holbrook & Osborn*, *supra* note 314, at 1368. For a discussion of the doctrine of equivalents, see generally MUELLER, *supra* note 17, at 468–77.

³¹⁸ *Cadence Pharm. Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364, 1368 (Fed. Cir. 2015).

³¹⁹ *Lewmar Marine, Inc. v. Barient, Inc.*, 827 F.2d 744, 747 (Fed. Cir. 1987) (emphasis omitted); *accord*, e.g., Alan L. Durham, *Patent Symmetry*, 87 B.U. L. REV. 969, 994 (2007) (“A rule of thumb known to every student of patent law is that whatever literally infringes a patent if it comes later in time, anticipates if it came before.”); Michael T. Siekman, *The Expanded Hypothetical Claim Test: A Better Test for Infringement for Biotechnology Patents Under the Doctrine of Equivalents*, 2 B.U. J. SCI. & TECH. L. 6, ¶ 11 (1996). This principle dates back to at least the nineteenth century. See *Peters v. Active Mfg. Co.*, 129 U.S. 530, 537 (1889) (“That which infringes, if later, would anticipate, if earlier.”).

³²⁰ Siekman, *supra* note 319, ¶ 11 (emphasis omitted) (quoting DONALD S. CHISUM & MICHAEL A. JACOBS, *UNDERSTANDING INTELLECTUAL PROPERTY LAW* § 2C[3][a] at 2-54 (1992)).

³²¹ See *Krippelz v. Ford Motor Co.*, 667 F.3d 1261, 1265 (Fed. Cir. 2012).

³²² See *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1215 (Fed. Cir. 2014).

and literal infringement are the same,³²³ and because the determinations involved are factual in nature, it makes sense that the Federal Circuit treats both of these issues as questions of fact.³²⁴

Although the determinations of infringement under the doctrine of equivalents and obviousness are not exact mirror images of each other with respect to time,³²⁵ these determinations are nonetheless analogous³²⁶ and should be treated consistently—as questions of fact.³²⁷ Indeed, as one commentator described:

Obviousness is a snare for the patentee; equivalence the bane of an accused infringer. Yet the two concepts have much in common. Each extends around a more definite entity a ghostly penumbra of legal significance. Obviousness expands the obstacles to patentability posed by the disclosures of the prior art; equivalence broadens the reach of the patent beyond what the patentee explicitly claimed.³²⁸

³²³ Siekman, *supra* note 319, ¶ 11 (emphasis omitted) (quoting CHISUM & JACOBS, *supra* note 320).

³²⁴ See *Ericsson*, 773 F.3d at 1214.

³²⁵ Durham, *supra* note 319, at 970. “The courts . . . have preserved the distinction” between the doctrine of equivalents and obviousness. *Id.* “A product infringes by equivalence . . . not because it is an obvious variation of the claimed invention, but because the differences are ‘insubstantial.’” *Id.* But see Siekman, *supra* note 319, ¶ 11 (“The interplay between the doctrine of equivalents and obviousness can be summarized by the maxim ‘that which infringes under the doctrine of equivalents, if later, would render obvious, if earlier.’”).

³²⁶ See *Lewmar Marine, Inc. v. Bariant, Inc.*, 827 F.2d 744, 748 (Fed. Cir. 1987) (“[T]he doctrine of equivalents . . . , if one wished to draw a parallel, is somewhat akin to obviousness.”); Durham, *supra* note 319, at 970 (“[T]he two concepts [of obviousness and infringement under the doctrine of equivalents] have much in common.”); Siekman, *supra* note 319, ¶ 11. One commentator has explored treating the determinations under the doctrine of equivalents and obviousness symmetrically. See generally Durham, *supra* note 319. In other words, “if ‘nonobvious’ changes are enough to distinguish a patentable invention from the prior art, then further ‘nonobvious’ changes should be enough to avoid infringing the patent.” *Id.* at 969 (emphasis omitted).

³²⁷ Hillen, *supra* note 242, at 198 n.53 (“The striking similarity between the so-called ‘doctrine of equivalence’ [sic] and the obviousness inquiry leads one to wonder how the doctrine of equivalence [sic] could be a ‘determination of fact,’ dictating deference to the trial court’s findings, while obviousness is a legal inquiry open to [plenary] appellate review.” (citation omitted)).

³²⁸ Durham, *supra* note 319, at 970.

Importantly, the ultimate determinations for both infringement under the doctrine of equivalents and invalidity for obviousness involve the PHOSITA.³²⁹ The question for obviousness is whether the claimed invention would have been obvious to a hypothetical PHOSITA.³³⁰ Similarly, the question for infringement under the doctrine of equivalents is whether a PHOSITA would recognize that an element of the accused device was only insubstantially different from the corresponding claim limitation.³³¹ Although these determinations are not identical,³³² they do not differ from each other in any meaningful way with respect to whether they are questions of law and fact. Both determinations are factual in nature. The Federal Circuit treats infringement under the doctrine of equivalents as a question of fact.³³³ Therefore, the court should also treat the analogous obviousness determination as a question of fact.

D. Even Though Obviousness Is Supposed to Be a Question of Law, District Courts Nonetheless Treat the Issue as a De Facto Question of Fact

Although it is supposedly well settled that the ultimate question of obviousness is supposed to be a question of law for the court,³³⁴ district courts nonetheless routinely treat the issue as if it were one of fact for the jury. Indeed, the Federal Circuit expressly allows district courts to submit the issue of obviousness to juries.³³⁵ In doing

³²⁹ 35 U.S.C. § 103 (2012); *see* *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1357 (Fed. Cir. 2004) (infringement under the doctrine of equivalents); 2-5 CHISUM, *supra* note 154, § 5.04 (obviousness).

³³⁰ § 103; *see* 2-5 CHISUM, *supra* note 154, § 5.04.

³³¹ *See* *Lighting World*, 382 F.3d at 1357. And “the requirement that equivalence be evaluated from the perspective of one of ordinary skill in the art applies whether equivalence is measured by the ‘function-way-result’ test or by the ‘insubstantial differences’ test.” *Id.*

³³² *Durham*, *supra* note 319, at 970.

³³³ *Cadence Pharm. Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364, 1368 (Fed. Cir. 2015).

³³⁴ *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566 (Fed. Cir. 1987).

³³⁵ Theresa Weisenberger, Note, *An “Absence of Meaningful Appellate Review”?: Juries and Patent Obviousness*, 12 VAND. J. ENT. & TECH. L. 641, 659 (2010) (“While the obviousness determination is a legal one, the Federal Circuit allows the court to submit this issue to the jury and rejects the notion that these verdicts are merely advisory.” (footnote omitted) (citing *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1356 (Fed. Cir. 2001); *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893 (Fed. Cir. 1984))).

so, the district court may decide to (1) submit the entire issue of obviousness to the jury to issue a general verdict concerning obviousness,³³⁶ or (2) submit only the factual underpinnings of obviousness³³⁷ to the jury and require the jury to answer special interrogatories concerning these factual underpinnings.³³⁸ If the ultimate question of obviousness were a de facto and de jure question of law, then this second option should be common. But an examination of recent Federal Circuit opinions has revealed that this second option is relatively rare. Instead, in the vast majority of recent Federal Circuit cases that review obviousness judgments involving jury findings, district courts chose the first option and sent the ultimate issue of obviousness to the jury for a general verdict. In so doing, these courts have treated the ultimate issue of obviousness as a de facto question of fact rather than a question of law, and the Federal Circuit has routinely allowed them to do so.

³³⁶ See, e.g., *InTouch Techs., Inc. v. VGO Commc'ns, Inc.*, 751 F.3d 1327, 1337 (Fed. Cir. 2014) (reviewing a district court's judgment of obviousness where the district court submitted the entire issue of obviousness to the jury); see also Weisenberger, *supra* note 335, at 660–62 (describing how the Federal Circuit reviews jury verdicts of obviousness where the jury has issued a general verdict). Where a district court allows the jury to render a general verdict concerning the ultimate issue of obviousness, the Federal Circuit reviews the district court's judgment by “first presum[ing] that the jury resolved the underlying factual disputes in favor of the verdict.” *InTouch Techs.*, 751 F.3d at 1339. The Federal Circuit then “leave[s] those presumed findings undisturbed if they are supported by substantial evidence.” *Id.* Finally, the Federal Circuit “examine[s] the [ultimate] legal conclusion [of obviousness] de novo to see whether it is correct in light of the presumed jury fact findings.” *Id.* (second and third alterations in original) (citing *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1356–57 (Fed. Cir. 2012)); see also, e.g., *Sanofi-Aventis Deutschland GmbH v. Glenmark Pharm. Inc., USA*, 748 F.3d 1354, 1358 (Fed. Cir. 2014) (“When the question of obviousness is tried to a jury, on appeal we ascertain whether the jury was correctly instructed on the law, whether there was substantial evidence in support of factual findings necessary to the verdict, and whether the verdict was correct on the supported facts. The court must ‘accept implicit factual findings upon which the legal conclusion is based when they are supported by substantial evidence.’” (quoting *Kinetic Concepts*, 688 F.3d at 1359)). The Federal Circuit upholds “[a] general jury verdict of invalidity . . . if there was sufficient evidence to support any of the alternative theories of invalidity.” *InTouch Techs.*, 751 F.3d at 1346.

³³⁷ See *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). For a detailed discussion of the obviousness determination, see *supra* Section I.B.

³³⁸ *I/P Engine, Inc. v. AOL Inc.*, 576 F. App'x 982, 985 (Fed. Cir. 2014) (per curiam) (reviewing a district court's judgment of nonobviousness where the district court submitted the factual issues to the jury and then determined the ultimate issue of obviousness itself based on the jury's factual findings), *cert. denied*, 136 S. Ct. 54 (2015).

For this Article, the author examined the Federal Circuit's opinions from 2013 to 2015 in which juries considered the issue of obviousness.³³⁹ There were twenty-four such opinions, both precedential and non-precedential.³⁴⁰ Interestingly, in twenty-one of

³³⁹ The author searched the Court of Appeals for the Federal Circuit ("CTAF") database on Westlaw using the following search: "obvious! & patent & jury," restricted to the years 2013 through 2015. After performing this search, the author reviewed the results and discarded each false positive—i.e., each case in which the Federal Circuit did not actually review a jury's determination of obviousness in a district court infringement action.

In no way does the author intend this examination of Federal Circuit opinions to be any sort of rigorous empirical analysis. Indeed, the data gathered here suffers from serious limitations. First, the sample size here is quite small—only twenty-four cases in total. Second, the time period sampled is quite small—only three years. Third, the author examined only opinions available on Westlaw—thus, the author was not able to take summary affirmances into account in any way. Fourth and finally, the author examined only Federal Circuit opinions—the author did not examine any district court opinions. An extensive examination of district court opinions might yield more interesting results, but such an empirical study is beyond the intended scope of this Article.

³⁴⁰ Of the twenty-four opinions, sixteen were precedential opinions, and eight were non-precedential opinions. There were four precedential cases from 2015. *See* *ABT Sys., LLC v. Emerson Elec. Co.*, 797 F.3d 1350 (Fed. Cir. 2015); *Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd.*, 807 F.3d 1283 (Fed. Cir. 2015); *Circuit Check Inc. v. QXQ Inc.*, 795 F.3d 1331 (Fed. Cir. 2015); *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159 (Fed. Cir. 2015), *cert. denied*, 136 S. Ct. 270 (2015). And there was one non-precedential case from 2015. *See* *Innovention Toys, LLC v. MGA Entm't, Inc.*, 611 F. App'x 693 (Fed. Cir. 2015), *vacated*, 136 S. Ct. 2483 (2016).

There were five precedential cases from 2014. *See* *Fleming v. Escort Inc.*, 774 F.3d 1371 (Fed. Cir. 2014); *Stryker Corp. v. Zimmer, Inc.*, 782 F.3d 649 (Fed. Cir. 2014), *cert. granted*, 136 S. Ct. 356 (2015), *vacated sub nom.* *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923 (2016); *SSL Servs., LLC v. Citrix Sys., Inc.*, 769 F.3d 1073 (Fed. Cir. 2014); *InTouch Techs., Inc. v. VGO Commc'ns, Inc.*, 751 F.3d 1327 (Fed. Cir. 2014); *Sanofi-Aventis Deutschland GmbH v. Glenmark Pharm. Inc., USA*, 748 F.3d 1354 (Fed. Cir. 2014). And there was one non-precedential case from 2014. *See* *I/P Engine, Inc. v. AOL Inc.*, 576 F. App'x 982 (Fed. Cir. 2014) (*per curiam*), *cert. denied*, 136 S. Ct. 54 (2015).

For 2013, there were seven precedential cases. *See* *Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325 (Fed. Cir. 2013); *St. Jude Med., Inc. v. Access Closure, Inc.*, 729 F.3d 1369 (Fed. Cir. 2013); *Alexsam, Inc. v. IDT Corp.*, 715 F.3d 1336 (Fed. Cir. 2013); *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 711 F.3d 1348 (Fed. Cir. 2013); *SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365 (Fed. Cir. 2013); *Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310 (Fed. Cir. 2013); *Sovereign Software LLC v. Newegg Inc.*, 705 F.3d 1333 (Fed. Cir.), *amended on reh'g*, 728 F.3d 1332 (Fed. Cir. 2013). And there were six non-precedential cases from 2013. *See* *Lee v. Mike's Novelties, Inc.*, 543 F. App'x 1010 (Fed. Cir. 2013); *Comaper Corp. v. Antec, Inc.*, 539 F. App'x 1000 (Fed. Cir. 2013); *Metso Minerals, Inc. v. Powerscreen Int'l Distribution, Ltd.*, 526 F. App'x 988 (Fed. Cir. 2013); *CEATS, Inc. v. Cont'l Airlines, Inc.*, 526 F. App'x 966 (Fed.

these twenty-four opinions, the district courts and the Federal Circuit effectively treated the ultimate issue of obviousness as a question of fact, not as a question of law.³⁴¹

For example, *Alexsam, Inc. v. IDT Corp.* is typical of how district courts and the Federal Circuit treat obviousness as a de facto question of fact.³⁴² In *Alexsam*, the district court gave the issue of obviousness to the jury, which found that the asserted claims were not invalid for obviousness.³⁴³ There is no mention anywhere in the Federal Circuit's opinion that the district-court judge treated the issue as a question of law and only used the jury to find the underlying *Graham* facts.³⁴⁴ Instead, the district court allowed the jury to make the ultimate determination that the asserted claims were not invalid for obviousness.³⁴⁵ And although the Federal Circuit stated in its opinion that the ultimate issue of obviousness is a question of law depending on underlying facts,³⁴⁶ the court nonetheless reviewed the jury's decision that the claims were not invalid for obviousness as if this issue were a question of fact.³⁴⁷ In doing so, the court held that there was substantial evidence that supported the jury's finding of non-invalidity,³⁴⁸ as would be typical in a review of a purely factual question.³⁴⁹ The court then affirmed the jury's de-

Cir. 2013); *Harris Corp. v. Fed. Exp. Corp.*, 502 F. App'x 957 (Fed. Cir. 2013); *Accentra, Inc. v. Staples, Inc.*, 500 F. App'x 922 (Fed. Cir. 2013).

³⁴¹ The court did not effectively treat the issue as a question of fact in only three cases. See *ABT Sys.*, 797 F.3d at 1357; *I/P Engine*, 576 F. App'x at 986; *Soverain Software*, 705 F.3d at 1336.

³⁴² 715 F.3d 1336 (Fed. Cir. 2013).

³⁴³ *Id.* at 1341.

³⁴⁴ See *id.* at 1340–41, 1346–48.

³⁴⁵ See *id.*

³⁴⁶ *Id.* at 1346.

³⁴⁷ See *id.* at 1346–48.

³⁴⁸ *Id.*

³⁴⁹ See MOORE ET. AL., *supra* note 94, § 206.02. In general, when reviewing a jury verdict, a reviewing court must affirm the verdict if the record shows that substantial evidence supports the verdict. *Id.* The rules for applying this substantial-evidence review are as follows:

The reviewing court may not reweigh the evidence or reassess the credibility of witnesses. Rather, it must view all the evidence, all reasonable inferences, and all credibility determinations in the light most favorable to the verdict. If, in that light, the evidence is such that a rational finder of fact could come to the same conclusion, then there is sufficient evidence to support the verdict.

cision because it concluded that “[s]ubstantial evidence . . . supports the jury’s finding that [the asserted] claims . . . are not invalid.”³⁵⁰ Such a review is no different than how the court reviews what it considers to be a pure issue of fact.³⁵¹

The Federal Circuit treated the ultimate question of obviousness as a question of law in only two of the twenty-four cases examined,³⁵² and these cases stand out as examples of where the court followed its de jure rule that obviousness is a question of law rather than its de facto rule that treats obviousness as a question of fact. One of these cases was *ABT Systems, LLC v. Emerson Electric Co.*, in which the district court allowed the jury to determine the issue of obviousness, and the jury found that the claims at issue were not invalid for obviousness.³⁵³ In response, the accused infringers filed a post-trial motion for judgment as a matter of law (“JMOL”) notwithstanding the verdict.³⁵⁴ The district-court judge denied the JMOL motion and deferred to the jury’s findings, holding that the jury could have reasonably found that the claims were not invalid.³⁵⁵ In doing so, the judge applied the substantial-evidence rule to the jury’s verdict of nonobviousness.³⁵⁶ Thus, the

Id. (footnote omitted).

³⁵⁰ *Alexsam*, 715 F.3d at 1348. Although Judge Mayer dissented, his dissenting opinion was not based at all on the issue of invalidity for obviousness. *See id.* at 1348–51 (Mayer, J., dissenting). Instead, Judge Mayer’s dissent was based on the issue of invalidity for lack of subject-matter eligibility. *See id.*

³⁵¹ *See, e.g.*, *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 848–52 (Fed. Cir. 2010), *aff’d*, 564 U.S. 91 (2011). In *i4i*, the Federal Circuit reviewed a jury’s finding of infringement. *Id.* The court noted that a finding of “[i]nfringement is a question of fact.” *Id.* at 849. In reviewing a jury verdict of infringement, the Federal Circuit “review[ed] the verdict only for substantial evidence.” *Id.* The court then identified evidence that supported the jury’s verdict of infringement. *Id.* at 849–52. The court ultimately concluded that the verdict was supported by substantial evidence of contributory infringement, and inducement to infringe. *Id.* at 851–52. Thus, the Federal Circuit affirmed the jury’s finding of infringement. *Id.* at 863.

³⁵² *ABT Sys. LLC v. Emerson Elec. Co.*, 797 F.3d 1350, 1357 (Fed. Cir. 2015); *I/P Engine, Inc. v. AOL Inc.*, 576 F. App’x 982, 986 (Fed. Cir. 2014) (per curiam), *cert. denied*, 136 S. Ct. 54 (2015).

³⁵³ 797 F.3d at 1352.

³⁵⁴ *Id.* at 1353–54.

³⁵⁵ *Id.* at 1354.

³⁵⁶ *Id.* In reviewing a decision on a post-verdict JMOL motion, a district court must grant such a motion only if “the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue.” *Id.* (quoting FED. R. CIV. P.

district-court judge followed the norm in treating obviousness as a de facto issue of fact.

In reviewing the judgment in *ABT Systems*, the Federal Circuit reversed the district court's decision to deny the JMOL motion.³⁵⁷ In doing so, the Federal Circuit departed from the norm of treating obviousness as a de facto issue of fact, and instead treated it as a question of law.³⁵⁸ The Federal Circuit began by "assign[ing] due deference to the jury's verdict" and "presume[d] that the jury resolved the underlying factual disputes in favor of the verdict."³⁵⁹ Taking these facts implied by the verdict in conjunction with all the undisputed facts, the Federal Circuit substituted its judgment for the jury's and concluded that the claims were invalid for obviousness.³⁶⁰ The court effectively emphasized that its precedent allowed it to decide the ultimate question of obviousness as a question of law: "[A] jury verdict does not mean that we are free to abdicate our role as the ultimate decision maker on the question of obviousness. That decision remains within our province."³⁶¹

Of the cases examined, one is unique in that instead of sending the issue of obviousness to the jury, the district court granted a pre-verdict motion for JMOL that the claims at issue were not invalid for obviousness.³⁶² On appeal, the Federal Circuit held that taking this issue from the jury did not violate the accused infringer's right to a jury trial.³⁶³ The Federal Circuit then reviewed the district court's grant of JMOL de novo.³⁶⁴ The Federal Circuit disagreed

50(a)). And the district court must draw "all reasonable inferences . . . in favor of the nonmoving party without making credibility assessments or weighing the evidence." *Id.* (quoting *Penford Corp. v. Nat'l Union Fire Ins. Co.*, 662 F.3d 497, 503 (8th Cir. 2011)).

³⁵⁷ *Id.* at 1357.

³⁵⁸ *See id.* at 1362. Interestingly, the patentee characterized the accused infringer's arguments that the Federal Circuit should overturn the jury's verdict of nonobviousness as "an attempt to retry credibility and factual determinations made by the jury." *Id.* at 1356.

³⁵⁹ *Id.* at 1357.

³⁶⁰ *Id.* at 1362.

³⁶¹ *Id.* (internal quotation marks omitted) (quoting *Richardson-Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1479 (Fed. Cir. 1997)).

³⁶² *Soverain Software LLC v. Newegg Inc.*, 705 F.3d 1333, 1336 (Fed. Cir.), *amended on reh'g*, 728 F.3d 1332 (Fed. Cir. 2013).

³⁶³ *Id.* at 1336–37.

³⁶⁴ *Id.* at 1337.

with the district-court judge's decision and reversed, holding that the evidence compelled a judgment that the claims were invalid for obviousness.³⁶⁵

Although the district court's approach in *Soverain Software LLC v. Newegg Inc.* seemingly treated the ultimate issue of obviousness as a question of law, this approach is nonetheless consistent with treating the ultimate issue of obviousness as a question of fact. As the Federal Circuit noted in *Soverain Software*, a trial court is always free to take an issue from the jury and grant JMOL where "the facts are sufficiently clear that the law requires a particular result"³⁶⁶—even for an issue that is a question of fact.³⁶⁷ Thus, even if the ultimate issue of obviousness is treated as a question of fact, a district-court judge is free to take the issue from the jury by granting a pre-verdict JMOL where compelled by the facts, and a judge is free to grant a post-verdict JMOL where no reasonable jury could have reached a particular verdict.³⁶⁸ Under this approach, treating the ultimate issue of obviousness as a question of fact would allow courts to decide the issue as a question of law where compelled by the facts, while still requiring the Federal Circuit to defer to jury verdicts in close cases where the district court did not grant JMOL.

CONCLUSION

Although the Supreme Court and Federal Circuit classify this ultimate determination of obviousness as one of law reviewed without deference,³⁶⁹ this determination should properly be classified as one of fact and reviewed with deference. Indeed, the Federal Circuit's reasoning that the ultimate question of obviousness is really a question of law rather than a question of fact is flawed. Contrary to the Federal Circuit's reasoning, the obviousness determination does not "engage[the] court in an exercise legal in na-

³⁶⁵ *Id.* at 1347.

³⁶⁶ *Id.* at 1336 (quoting *Weisgram v. Marley Co.*, 528 U.S. 440, 448 (2000)).

³⁶⁷ See generally 9B CHARLES ALAN WRIGHT & ARTHUR R. MILLER, FEDERAL PRACTICE & PROCEDURE: FEDERAL RULES OF CIVIL PROCEDURE § 2524 (3d ed. 2016).

³⁶⁸ See FED. R. CIV. P. 50(a); WRIGHT & MILLER, *supra* note 367, § 2524.

³⁶⁹ *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966); *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566 (Fed. Cir. 1987).

ture.”³⁷⁰ The court correctly draws a parallel between the PHOSITA in obviousness law with the reasonably prudent person in negligence law.³⁷¹ But the negligence determination is a question of fact,³⁷² so the obviousness determination should also be a question of fact. And just because obviousness is an “ultimate fact,” does not mean that it should not be treated as a question of fact and reviewed with deference.³⁷³

Moreover, the Supreme Court’s statement that the ultimate question of obviousness is one of law was never properly supported by precedent.³⁷⁴ And treating obviousness as a question of law is inconsistent with how the Federal Circuit treats other analogous patent-law issues, such as anticipation and infringement under the doctrine of equivalents. Finally, even though under current law obviousness is supposed to be a question of law, district courts nonetheless treat the issue as a de facto question of fact, without the objection of the Federal Circuit. Therefore, for these reasons, in an appropriate case, the Supreme Court should hold that the ultimate determination of obviousness is a question of fact to be reviewed as such.

³⁷⁰ *Panduit*, 810 F.2d at 1566.

³⁷¹ *Id.*

³⁷² *Cooter & Gell v. Hartmarx Corp.*, 496 U.S. 384, 402 (1990); *Thomas v. Gen. Motors Acceptance Corp.*, 288 F.3d 305, 307–08 (7th Cir. 2002); *CHILDRESS & DAVIS*, *supra* note 1, § 2.28, at 2-173; *Chen*, *supra* note 117, at 89; *Childress*, *supra* note 104, at 186.

³⁷³ *Cf. Pullman-Standard v. Swint*, 456 U.S. 273, 287 (1982) (“Rule 52(a) . . . does not divide findings of fact into those that deal with ‘ultimate’ and those that deal with ‘subsidiary’ facts.”).

³⁷⁴ *Lane*, *supra* note 265, at 1169–72.