

FIXING SECONDARY CONSIDERATIONS IN PATENT OBVIOUSNESS ANALYSIS

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ABSTRACT

35 U.S.C. § 103 provides that an invention is unpatentable if it would have been obvious before the filing of the invention to a person of ordinary skill in the art (“POSITA”). When weighing obviousness, courts consider not only prior art, but also secondary considerations. One problem with the current law is that courts have been inconsistent in whether the secondary considerations are actually “secondary.” A more fundamental problem is that economic considerations (such as commercial success, licensing, and copying by others) should not be part of § 103 because they directly contradict the statutory language of § 103, which mandates that only a POSITA (technical person) can evaluate obviousness. On the other hand, technical secondary considerations (such as long-felt need, failure of others, professional approval, and unexpected results) are proper under § 103, but they should be part of the prima facie obviousness analysis, not “secondary.” Further, the current “nexus” must exist between a secondary consideration and an issued patent claim. Due to reasons such as time delays, information gaps, personnel changes, and transactional costs, the current nexus often fails to reflect the reality of innovation and patent prosecution.

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This Article proposes solutions to address these problems. To allow proper inclusion of objective indicia, a first approach is to amend § 103 to expressly allow all types of objective indicia. A second approach is to modify the definition of a POSITA via case law when weighing objective indicia. Both approaches provide clarity that the consideration of objective indicia is not “secondary.” The second approach seems more practical because it requires no congressional action. Regarding the difficult issue of “nexus,” this Article proposes a minor modification to its definition such that the nexus would exist between a secondary consideration and an initially-filed, allowable claim, rather than an eventually-issued patent claim. The modified nexus can effectively reduce the complexity, uncertainty, and transactional costs incurred during innovation and patent prosecution. The modified nexus requirement also has a safeguard against potential abuse.

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I. INTRODUCTION

For many patent stakeholders, such as patent owners, licensees, and practitioners, properly understanding 35 U.S.C. § 103 is crucial for their livelihood. Section 103 provides that an invention is unpatentable if it would have been obvious before the filing date of the invention to a person of ordinary skill in the art (“POSITA”).¹ Currently, “secondary considerations” constitute an important part of the § 103 jurisprudence.² Patent owners often resort to secondary considerations to defend the validity of a patent.³ Secondary considerations weigh relevant objective indicia—such as commercial success, commercial acquiescence via licensing, copying by infringers, long-felt need, failure of others, professional approval, near-simultaneous invention, and unexpected results—to determine whether a patent claim is obvious.⁴ Additionally, in a secondary considerations analysis, courts

¹ 35 U.S.C. § 103 (2011).

² *See, e.g.*, *Bosch Auto. Serv. Sols., LLC v. Matal*, 878 F.3d 1027, 1036 (Fed. Cir. 2017).

³ *See, e.g.*, Steven J. Schwarz, *The Importance of Secondary Considerations in Proving Nonobviousness in the Post-KSR Era*, VENABLE LLP (Sept. 23, 2008), <https://www.lexology.com/library/detail.aspx?g=edf56ad0-f589-4933-9cce-7540015aef4b> [<https://perma.cc/R2KM-2HA9>].

⁴ Andrew Blair-Stanek, *Increased Market Power as a New Secondary Consideration in Patent Law*, 58 AM. U. L. REV. 707, 712–13 (2009).

require a “nexus” between a patent claim and the evidence of secondary considerations in order for the evidence to be given substantial weight.⁵

The Supreme Court first introduced secondary considerations as part of the § 103 analysis in 1966.⁶ Since then, federal courts—including the Court of Appeals for the Federal Circuit, which has exclusive jurisdiction over patent-related appeals⁷—have developed extensive jurisprudence on this topic.⁸ Unfortunately, the Federal Circuit has been inconsistent in its application of secondary considerations.⁹ In some cases, the Federal Circuit emphasized that secondary considerations are *part of* the *prima facie* obviousness analysis, not just an *afterthought*.¹⁰ However, in other cases the Federal Circuit seemed to shift its position. For instance, the Federal Circuit held in 2017 that the purpose of secondary considerations is to rebut a *prima facie* showing of obviousness.¹¹ Not surprisingly, the Federal Circuit’s inconsistency has faced criticisms

⁵ *Simmons Fastener Corp. v. Illinois Tool Works, Inc.*, 739 F.2d 1573, 1575 (Fed. Cir. 1984).

⁶ *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966).

⁷ 28 U.S.C. § 1295(a) (2011).

⁸ *See, e.g., Bosch*, 878 F.3d at 1037 (citing many other precedential cases).

⁹ *See Dako Denmark A/S v. Leica Biosystems Melbourne Party Ltd.*, 662 F. App’x 990, 996 (Fed. Cir. 2016); *Leo Pharm. Prod., Ltd. v. Rea*, 726 F.3d 1346, 1357–58 (Fed. Cir. 2013). *But see Intercontinental Great Brands LLC v. Kellogg N. Am. Co.*, 869 F.3d 1336, 1345–47 (Fed. Cir. 2017).

¹⁰ *Dako Denmark*, 662 F. App’x at 996; *Leo Pharm.*, 726 F.3d at 1357–58; ROBERT A. MATTHEWS, 3 ANN. PAT. DIG. § 18:93, Westlaw (database updated Oct. 2019); *see also* Jason E. Stach & Jeffrey A. Freeman, *Time to Stop Thinking About Secondary Considerations as Secondary*, FINNEGAN (Jan./Feb. 2016), <https://www.finnegan.com/en/insights/time-to-stop-thinking-about-secondary-considerations-as.html> [<https://perma.cc/LWX9-NFCZ>].

¹¹ *Intercontinental Great Brands*, 869 F.3d at 1345–47.

since it causes difficulty to patent practitioners.¹² Stated differently, practitioners cannot predict with certainty how the Federal Circuit will react to certain cases.

This Article introduces the basic concepts of obviousness and secondary considerations in Part II. Part III raises new criticisms on the current law of secondary considerations. For example, Part III contends that not all secondary considerations are the same. A fundamental problem within the obviousness analysis is its improper inclusion of “economic” considerations such as commercial success, licensing, and copying by others.¹³ Economic considerations should not be part of the § 103 analysis because they directly contradict the statutory language of the section, which mandates that only a POSITA (technical person) can evaluate obviousness.¹⁴ On the other hand, “technical” considerations such as long-felt need, failure of others, professional approval, near-simultaneous invention, and unexpected results are proper under § 103. But even here, the label “secondary” is misleading because these factors should be part of the prima facie obviousness analysis.¹⁵ In addition, this Article highlights that, in an imperfect world filled with time delays, information gaps, personnel changes, and transactional costs, the current nexus requirement sometimes fails to accurately reflect the

¹² See, e.g., *id.*; Jay Jongjitirat, Leapfrog Enterprises v. Fisher-Price: *Secondary Considerations in Nonobviousness Determinations*, 42 U.C. DAVIS L. REV. 599, 630 (2008) (criticizing the holding in Leapfrog Enterprises) (“The Leapfrog court erred by failing to weigh and apply secondary considerations appropriately in analyzing nonobviousness. The court misinterpreted the Supreme Court’s most recent jurisprudence regarding the nonobviousness standard. Furthermore, the court’s holding leads to unpredictability and encourages abuse of the patent system.”).

¹³ See *infra* Section III.C.

¹⁴ 35 U.S.C. § 103.

¹⁵ See *infra* Section III.D.

reality of how inventions are implemented and how patent applications are prosecuted.¹⁶

More importantly, this Article, in Part IV, proposes novel solutions to address these problems. While previous commenters have advocated for total exclusion of secondary considerations from the obviousness analysis,¹⁷ this Article argues they should still be considered due to their important probative value.¹⁸ Specifically, to allow proper inclusion of objective indicia, a first approach is to amend the statute to expressly allow all types of objective indicia.¹⁹ A second approach is to change case law to modify the definition of a POSITA when weighing objective indicia.²⁰ Both approaches provide clarity that the consideration of objective indicia is not “secondary.” The second approach seems more practical because it requires no congressional action.²¹ The proposed approaches matter because they would cure the improper inclusion of non-technical secondary considerations in the obviousness analysis.

Part IV also tackles problems regarding the current “nexus” requirement and proposes a novel solution that has not been proposed elsewhere.²² Specifically, a modified definition could require the nexus to exist between a secondary consideration and an initially-filed, allowable claim, rather than an eventually-issued patent claim. The

¹⁶ See, e.g., *Bosch Auto. Serv. Sols., LLC v. Matal*, 878 F.3d 1027, 1036 (Fed. Cir. 2017).

¹⁷ See, e.g., Dorothy Whelan, *A Critique of the Use of Secondary Considerations in Applying the Section 103 Nonobviousness Test for Patentability*, 28 B.C. L. REV. 357, 380 (1987).

¹⁸ See *infra* Section IV.A.

¹⁹ See *infra* Section IV.B.

²⁰ See *infra* Section IV.C.

²¹ See *infra* Section IV.D.

²² See *infra* Section IV.E.

modified nexus requirement matters because it can effectively reduce the complexity, uncertainty, and transactional costs incurred during the innovation and patent prosecution process. The modified nexus requirement also provides a safety guard against potential abuse. This Article concludes in Part V.

II. CURRENT LAW ON SECONDARY CONSIDERATIONS

This Part provides an overview of the basic law on obviousness and secondary considerations. To provide context, this Part first generally discusses obviousness, and then introduces secondary considerations as part of the obviousness analysis. Next, this Part introduces the main recognized types of secondary considerations as well as the nexus requirement.

A. *35 U.S.C. § 103 is an Obviousness Analysis Conducted by a POSITA at the Time of the Invention*

The Patent Act of 1952 sets forth a number of patentability requirements.²³ 35 U.S.C. § 103 embodies one of the requirements, stating that a patent claim is unpatentable if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a POSITA.²⁴ Section 103 has remained substantively the same after the America Invents Act of 2011, except that the time of the invention has been amended to the effective filing date of the invention.²⁵

²³ See generally 35 U.S.C. §§ 101–103 (1952).

²⁴ *Id.* at § 103.

²⁵ 35 U.S.C. § (2011).

Obviousness is a question of law based on underlying findings of fact,²⁶ and the underlying findings of fact include: (1) the scope and content of the prior art; (2) the differences between the prior art and the claimed invention; (3) whether there is a motivation to combine prior art references; (4) the level of ordinary skill in the art; and (5) relevant objective indicia of non-obviousness.²⁷ Specifically, the fifth factor of objective indicia is weighted as “secondary considerations” in determining whether a patent claim is obvious.²⁸

B. Objective Indicia Are Weighted as Secondary Considerations in the Obviousness Analysis

The Supreme Court first introduced secondary considerations in 1966 into the § 103 analysis.²⁹ In *Graham v. John Deere Co. of Kansas City*, the Court stated that “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.”³⁰ In 2007, the Supreme Court issued the latest milestone decision on obviousness in *KSR Int’l Co. v. Teleflex Inc.*³¹

²⁶ *Bosch Auto. Serv. Sols., LLC v. Matal*, 878 F.3d 1027, 1035 (Fed. Cir. 2017).

²⁷ *Id.*

²⁸ *See, e.g., Blair-Stanek, supra* note 4.

²⁹ *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966). *But cf., Dow Chemical Co. v. Halliburton Oil Well Cementing Co.*, 324 U.S. 320, 330 (1945) (statement before *Graham*) (holding in 1945 that “[secondary] considerations are relevant only in a close case where all other proof leaves the question of invention in doubt. Here the lack of invention is beyond doubt and cannot be outweighed by such factors [of long felt need and commercial success].”).

³⁰ *Graham*, 383 U.S. at 17–18.

³¹ *See, e.g., KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007).

There, the Court endorsed continued use of secondary considerations in the obviousness analysis.³²

Following the Supreme Court's lead, the Federal Circuit has repeatedly declared: "Objective indicia of non-obviousness must be considered in every case where present."³³ In the words of Judge Rader, "[o]bviousness requires a court to walk a tightrope blindfolded (to avoid hindsight)—an enterprise best pursued with the safety net of objective evidence."³⁴ According to the Robbins article cited by the Supreme Court in *Graham*, secondary considerations provide a "nontechnical approach to patent cases" which reduces excessive partiality by experts and therefore provides greater certainty for patentees.³⁵ Secondary considerations evidence is considered more judicially cognizable than the highly technical facts frequently involved with patent litigation, as it is generally

³² *Id.* at 415 ("To this end, *Graham* set forth a broad inquiry and invited courts, where appropriate, to look at any secondary considerations that would prove instructive.").

³³ *Apple Inc. v. Samsung Elec. Co., Ltd.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc); *InTouch Tech., Inc. v. VGO Commc'ns, Inc.*, 751 F.3d 1327, 1347–48 (Fed. Cir. 2014); *Leo Pharm. Prod., Ltd. v. Rea*, 726 F.3d 1346, 1357–58 (Fed. Cir. 2013); *Power Integrations, Inc. v. Fairchild Semiconductor Intern., Inc.*, 711 F.3d 1348, 1367–69 (Fed. Cir. 2013); *Pro-Mold and Tool Co., Inc. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996) ("It is the secondary considerations that are often the most probative and determinative of the ultimate conclusion of obviousness or non-obviousness.").

³⁴ *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1378–79 (Fed. Cir. 2012).

³⁵ Richard L. Robbins, *Subtests of "Nonobviousness": A Nontechnical Approach to Patent Validity*, 112 U. PA. L. REV. 1169, 1170, 1184 (1964).

rooted in nontechnical facts about the invention, such as industry response or commercial success.³⁶

C. Main Types of Secondary Considerations

Courts over the years have developed nine recognized types of secondary considerations: (1) long-felt need; (2) failure of others; (3) commercial success; (4) commercial acquiescence via licensing; (5) professional approval; (6) copying by infringers; (7) progress through the United States Patent and Trademark Office (USPTO); (8) near-simultaneous invention; and (9) unexpected results.³⁷ Although these types of secondary considerations differ drastically, courts have not characterized the types into categories.³⁸ Among various types of secondary considerations, commercial success has traditionally been considered to be the most popular and most persuasive, but it has also been subject to heavy criticism.³⁹

D. The “Nexus” Requirement

In 1984, the Federal Circuit clarified for the first time that “[a] nexus between the merits of the claimed invention and the evidence of secondary considerations is required in order for the evidence to be given substantial weight in an obviousness decision.”⁴⁰ For example, when a commercial product is involved, to determine whether a nexus exists, the cases consider whether “the marketed

³⁶ Natalie A. Thomas, *Secondary Considerations in Nonobviousness Analysis: The Use of Objective Indicia Following KSR v. Teleflex*, 86 N.Y.U.L. REV. 2070, 2073 (2011).

³⁷ See, e.g., Blair-Stanek, *supra* note 4, at 712–13.

³⁸ See generally Blair-Stanek, *supra* note 4, at 712–13.

³⁹ See generally Blair-Stanek, *supra* note 4, at 712–13.

⁴⁰ *Simmons Fastener Corp. v. Ill. Tool Works, Inc.*, 739 F.2d 1573, 1575 (Fed. Cir. 1984).

product embodies the claimed features.”⁴¹ The nexus requirement remains a key part of a secondary considerations analysis.⁴²

Depending on whether a claimed invention maps to an overall product or merely a component thereof, the burden of establishing the nexus is different. Specifically, a nexus is presumed if a marketed product is coextensive with claim features.⁴³ However, a commercially successful product is not “coextensive” with a claimed invention when the invention is “only a component of a commercially successful machine or process.”⁴⁴ Consequently, the presumption of a nexus does not “apply where the patented invention is only a component of the product.”⁴⁵ Instead, secondary considerations evidence must then connect to “novel” elements of the claimed invention.⁴⁶

As Part III will show, the current law on secondary considerations suffers from various problems. Even with decades of jurisprudence, it remains unclear if and how secondary considerations should be applied in a § 103 analysis.

III. PROBLEMS IN THE CURRENT LAW

This part addresses various problems associated with the current law on secondary considerations. This part first discusses the inconsistency of the Federal Circuit in its

⁴¹ *Bosch Auto. Serv. Sols., LLC v. Matal*, 878 F.3d 1027, 1037 (Fed. Cir. 2017).

⁴² *Id.* at 1036–37.

⁴³ *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000).

⁴⁴ *Matthews*, *supra* note 10, § 18:101.

⁴⁵ *Id.* at § 18:94.

⁴⁶ *In re Huai-Hung Kao*, Nos. 2010-1307, 2010-1308, 2010-1309, 2011 WL 1832537, *14 (Fed. Cir. 2011); *Matthews*, *supra* note 10, § 18:94.

application of secondary considerations. Next, this part proposes a new method of classifying secondary considerations as either “technical” or “economic” to facilitate the discussion on why the current law has failed to recognize significant differences among different types of secondary considerations. This part then explains why technical considerations and economic considerations should be treated differently. Lastly, this part discusses how the important, yet deficient, “nexus” requirement sometimes fails to reflect the reality of innovation and patent prosecution.

A. *The Federal Circuit Has Been Inconsistent Regarding Whether Secondary Considerations are Actually “Secondary”*

In recent case law, the Federal Circuit has been inconsistent in how it has applied secondary considerations. On one hand, the Federal Circuit has emphasized that “consideration of the objective indicia is *part of* the whole obviousness analysis, not just an afterthought.”⁴⁷ That is, secondary considerations do not come into play only to rebut a *prima facie* case of obvious, but rather should factor in to the initial determination of obviousness.⁴⁸ Courts should consider secondary considerations together with the *prima facie* case of obviousness *before* determining whether an invention is obvious.⁴⁹

On the other hand, the Federal Circuit seems to shift its position in other cases. For instance, in 2017 it held that secondary considerations are used to rebut a *prima facie*

⁴⁷ *Leo Pharm. Prod., Ltd. v. Rea*, 726 F.3d 1346, 1357–58 (Fed. Cir. 2013) (emphasis in original).

⁴⁸ *Id.*; Matthews, *supra* note 10; Stach & Freeman, *supra* note 10.

⁴⁹ *E.g.*, *Dako Denmark A/S v. Leica Biosystems Melbourne Party Ltd.*, 662 F. App’x 990, 996 (Fed. Cir. 2016).

determination of obviousness.⁵⁰ The Federal Circuit suggested that, although objective indicia must be evaluated before drawing an ultimate conclusion on obviousness, they are not necessarily part of a prima facie analysis.⁵¹ It also seems that, while secondary considerations can sometimes tip the balance toward non-obvious, such considerations alone cannot trump a clear showing that an invention is obvious.⁵²

Not surprisingly, many have criticized how inconsistent the Federal Circuit has been in its use of secondary considerations.⁵³ Such inconsistency causes difficulty to patent practitioners because they cannot predict how the Federal Circuit would react to certain cases. This Article proposes approaches that would clarify the weight of secondary considerations, suggesting that they should be part of the prima facie case of obviousness.⁵⁴

B. Characterizing Different Types of Secondary Considerations as “Economic” or “Technical” Helps Discussion Herein

Even though courts have bundled all types of objective indicia under the umbrella of secondary considerations, this Article suggests that not all secondary considerations are the same.⁵⁵ Specifically, this part explains why characterizing different types of secondary

⁵⁰ *Intercontinental Great Brands LLC v. Kellogg N. Am. Co.*, 869 F.3d 1336, 1345–47 (Fed. Cir. 2017).

⁵¹ *Id.*

⁵² *Dow Chem. Co. v. Halliburton Oil Well Cementing Co.*, 324 U.S. 320, 330 (1945); *Merck Sharp & Dohme Corp. v. Hospira, Inc.*, 874 F.3d 724, 731 (Fed. Cir. 2017); Matthews, *supra* note 10, § 18:95.

⁵³ *See, e.g.*, Matthews, *supra* note 10; Jongjitirat, *supra* note 12.

⁵⁴ *See infra* Section IV.A.

⁵⁵ *See, e.g.*, Blair-Stanek, *supra* note 4.

considerations as “economic” or “technical” is helpful in secondary considerations.

Some secondary considerations—including long-felt need, failure of others, professional approval, near-simultaneous invention, and unexpected results—are both “technical” and “contemporaneous” in the sense that they relate to the state of mind of a POSITA before the time of the invention or filing.⁵⁶ Other secondary considerations—including commercial success, commercial acquiescence via licensing, and copying by infringers—are “non-technical” and “non-contemporaneous” in the sense that they do not view an invention through the lens of a POSITA before the time of the invention or filing.⁵⁷ Rather, they view the invention through the lens of non-POSITA personnel such as buyers, business people, infringers, and licensees after the time of the invention or filing. Progress through the USPTO is one odd-duck consideration that is technical but non-contemporaneous; however, it is not discussed much in this Article because it is rarely used.⁵⁸ Further, the non-technical considerations generally relate to the economic value of an invention because they reflect the invention’s value in the eyes of the market, competitors, or litigators.⁵⁹ Therefore, they are also loosely labeled “economic” considerations.

C. Economic Considerations Should Not Be Part of Obviousness Because They Contradict the Statutory Language of § 103

The economic considerations relate to the economic value of an invention in the eyes of buyers, business

⁵⁶ See, e.g., Whelan, *supra* note 17.

⁵⁷ See, e.g., Whelan, *supra* note 17.

⁵⁸ See, e.g., Blair-Stanek, *supra* note 4.

⁵⁹ Whelan, *supra* note 17.

people, infringers, and licensees after the time of the invention.⁶⁰ These secondary considerations should not be part of the obviousness analysis under § 103 in its current form. The economic value approach fundamentally contradicts § 103, which examines whether an invention would have been obvious at the time the invention was made or “before the effective filing date of the claimed invention” as evaluated by “a person having ordinary skill in the art [(POSITA)].”⁶¹ Therefore, § 103 requires a POSITA to view the claimed invention at the time of the invention or patent filing.⁶² Courts have generally considered a POSITA to be a technical person who understands the relevant technology, as opposed to non-technical persons such as business managers or lawyers.⁶³ For example, the ordinary skill of a POSITA includes identification of the type of problems encountered in the art, prior art solutions to those problems, understanding sophistication of the technology, and recognizing the rapidity with which innovations are made.⁶⁴ Typically, a POSITA is a researcher, a scientist, or an engineer.⁶⁵

The economic considerations improperly shift the focus of the obviousness inquiry from the perspective of the POSITA to the perspective of other people. As a result, the non-technical secondary considerations do not view a claimed invention through the lens of a POSITA. Instead, they view the claimed invention through the lens of non-

⁶⁰ Whelan, *supra* note 17.

⁶¹ 35 U.S.C. § 103.

⁶² *Id.*

⁶³ *Env'tl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 697 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984).

⁶⁴ *Id.* at 696.

⁶⁵ *See, e.g., id.* at 697.

POSITA parties such as buyers, business people, infringers, and licensees.⁶⁶

There are justifications for using economic considerations in the obviousness analysis but they are unpersuasive. The 1964 Robbins article, on which the Supreme Court relied in *Graham* to justify the inclusion of secondary factors into the obviousness equation,⁶⁷ lamented technical complexity and excessive bias as reasons for proposing an objective, non-technical manner of determining obviousness.⁶⁸ Nevertheless, secondary factors cannot change the fact that § 103 in its current form mandates a technical inquiry that only a POSITA can perform.⁶⁹ The Federal Circuit has stated that the consideration of commercial success is relevant “because the law presumes an idea would successfully have been brought to market sooner, in response to market forces, had the idea been obvious to persons skilled in the art.”⁷⁰ Stated another way, the lack of earlier successful market entry by others should indicate non-obviousness.⁷¹ But a better approach here would be to consider contemporaneous evidence around the time of the invention to establish the lack of earlier market entry by others (e.g., lack of economic incentives).⁷² The indirect evidence of commercial success such as sales and profits has limited, if any, probative value on whether the idea would have been

⁶⁶ Whelan, *supra* note 17.

⁶⁷ *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966).

⁶⁸ Robbins, *supra* note 35.

⁶⁹ 35 U.S.C. § 103.

⁷⁰ *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1376 (Fed. Cir. 2005).

⁷¹ *Id.*

⁷² R. DeForest McDuff et al., *Thinking Economically About Commercial Success*, 9 LANDSLIDE, no. 4 37, 39 (Mar./Apr. 2017).

successfully marketed sooner, above and beyond the contemporaneous evidence demonstrating this directly.⁷³

Overall, economic considerations contradict with the statutory language of § 103 because they do not reflect the perspective of a POSITA before the invention or patent filing date. Consequently, § 103 in its current form cannot properly weigh non-technical considerations.

D. Technical Considerations Are Proper Under § 103 But the Label “Secondary” Is Misleading

As discussed above, some secondary considerations—including long-felt need, failure of others, professional approval, near-simultaneous invention, and unexpected results—do relate to the state of mind of a POSITA before the time of the invention or filing.⁷⁴ Such factors thus should be properly considered under § 103. However, the label “secondary” is misleading because all technical considerations can and should be part of the “normal” prima facie obviousness analysis.⁷⁵ The factor of unexpected results, for example, is a routine factor used to prove the lack of motivation to combine.⁷⁶ Thus, there is no need to view these technical considerations separately as a fifth and last part of the obviousness analysis. As discussed above, the label “secondary considerations” means that these factors may sometimes be weighed only after a prima facie obviousness case has already been

⁷³ *Id.*

⁷⁴ *See, e.g.,* Whelan, *supra* note 17.

⁷⁵ *Dako Denmark A/S v. Leica Biosystems Melbourne Party Ltd.*, 662 F. App’x 990, 996 (Fed. Cir. 2016); *Leo Pharm. Prod., Ltd. v. Rea*, 726 F.3d 1346, 1357–58 (Fed. Cir. 2013); *Matthews*, *supra* note 10.

⁷⁶ M.P.E.P. § 2143 (9th ed. rev. Jan. 2018).

established.⁷⁷ To avoid uncertainty, these technical considerations should be part of the prima facie obviousness analysis, and not be considered “secondary.”

E. The Nexus Requirement Sometimes Does Not Reflect the Reality of Innovation and Patent Prosecution

As discussed above, courts currently require a “nexus” between a patent claim and the evidence of secondary considerations for the evidence to gain substantial weight in an obviousness analysis.⁷⁸ This nexus requirement is a valuable tool in secondary considerations. However, in an imperfect world filled with time delay, information gap, personnel change, and transactional cost, this requirement sometimes fails to accurately reflect the reality of how inventions are implemented and how patent applications are prosecuted. This part uses commercial success as an example of a secondary consideration to illustrate the deficiencies of the current nexus.

1. Time Delay and Product Change

When evaluating commercial success, the current nexus requirement necessitates that a commercial product embodies a claimed invention.⁷⁹ To be clear, it means that an eventually successful product must embody an eventually-issued patent claim. But in practice, patent filing, claim issuance, and product commercialization are often not contemporaneous. There is a time delay between the filing of an application and the issuance of a patent, and a time delay between the filing of the application and product commercialization.

⁷⁷ *Supra* Section III.A.

⁷⁸ *Simmons Fastener Corp. v. Ill. Tool Works, Inc.*, 739 F.2d 1573, 1575 (Fed. Cir. 1984).

⁷⁹ *Bosch Auto. Serv. Sols., LLC v. Matal*, 878 F.3d 1027, 1035 (Fed. Cir. 2017).

Many of today's commercial products are highly complex, and their development involves numerous patents and many different personnel. In some cases, commercial products may not be available for sale until years after the date of invention, during which time there are likely to be changes and evolutions. Some reasons for such changes are unrelated to technical merits (e.g., market demands, government regulations, manufacturing specifications, etc.). As a result, even though an inventor may initially know how a future product would embody the invention, with time the future product may no longer embody that invention.

2. Information Gaps in the Patenting Process

Patent claims are typically drafted by a patent practitioner based on an invention disclosure provided by an inventor. Sometimes, an in-house counsel serves as an intermediary. The current nexus requirement tends to require seamless communication and information sharing among all parties to ensure that a future product can embody an eventually-issued patent claim. However, due to various reasons such as limited communication means, transactional costs, and trade secret concerns,⁸⁰ not everybody can be on the same page at all times. As a result, there are information gaps, for example, between an inventor and in-house counsel, and between the in-house counsel and an outside practitioner. Typically, patent practitioners understand far less about product implementation than inventors do. Sometimes, a practitioner has limited access to inventors, so he or she is

⁸⁰ See, e.g., Christina Morales, *My Employee Shared Our Trade Secrets. Now What?*, UPCOUNSEL BLOG, <https://www.upcounsel.com/blog/employee-shared-trade-secrets-now> [<https://perma.cc/C97K-ST57>] (last visited Nov. 10, 2019).

unable to check with the inventor about whether a product embodies a claim.

The patenting process exacerbates the problem of potential discord between an eventually-issued patent claim and a commercial product. For example, during prosecution, claims are likely to be amended to recite new features to overcome prior art. Therefore, even if an inventor had accurately confirmed at the time of filing that a future product would embody the initial claims, this may no longer be true after claim amendment. Sometimes, it is costly or otherwise unrealistic to ask a product manufacturing team to change the course of product manufacturing just to add new features now required by an amended claim. Furthermore, not all claim amendments can run through inventors because some companies discourage outside counsel from directly contacting inventors during prosecution for fear of creating liabilities.⁸¹ Consequently, when a practitioner is amending claims during prosecution, he or she may be unsure whether the product would still embody the amended claim.

3. Personnel Changes

It is not uncommon for the personnel involved in a patent to change during the patenting process since it can

⁸¹ For example, if outside counsel discusses with the inventor a prior art reference that is a competitor's patent, the inventor would be deemed to have learned of the competitor's patent. Due to the duty to disclose material information to the USPTO, the inventor would then have to include this patent in the Information Disclosure Statements (IDS) of all future relevant applications. 37 C.F.R. § 1.56 (2012); M.P.E.P. § 609 (9th ed. rev. Jan. 2018). That unnecessarily increases liability and transactional costs. Furthermore, if the competitor later alleges that the client has infringed this very patent, there is an increased risk of a willful infringement allegation. 35 U.S.C. § 284 (2012).

take years for the USPTO to examine claims.⁸² During that time, the prosecutor may no longer be the person who drafted the original claims and the inventor(s) and/or the in-house counsel may have left the company. Thus, it is possible that no person would be intimately familiar with the original correlation between the patent claims and the associated product.

4. Transactional Costs

In theory, information gaps between various personnel can be bridged by seamless communication and record-keeping. But in reality, every transaction has a cost.⁸³ For example, over time each communication between inventor and counsel costs money to the company and keeps the inventor from performing his or her daily duties. Meticulous record-keeping is great, but it takes time that some cannot afford. Companies have limited budgets for patent applications and are typically reluctant to pay for practices that increase costs.

Overall, this part highlights various problems that the current law suffers from. Part IV attempts to address these problems.

⁸² Jim Singer, *How Long Does it Take to Get a Patent or Trademark Registration? (2017 Update)*, IP SPOTLIGHT (Dec. 19, 2017), <https://ip.spotlight.com/2017/12/19/how-long-does-it-take-to-get-a-patent-or-trademark-registration-2017-update> [https://perma.cc/728X-8PMG] (last visited Nov. 10, 2019).

⁸³ Gene Quinn, *The Cost of Obtaining a Patent in the US*, IP WATCHDOG (Apr. 4, 2015), <http://www.ipwatchdog.com/2015/04/04/the-cost-of-obtaining-a-patent-in-the-us/id=56485> [https://perma.cc/QK C2-2BB5] (last visited Nov. 10, 2019).

IV. NEW PROPOSALS TO FIX SECONDARY CONSIDERATIONS

Recognizing problems associated with the current state of law on secondary considerations, this part proposes several solutions and weighs the pros and cons of each solution. Specifically, this part first acknowledges the probative value of secondary considerations in a patentability analysis. Next, this part discusses proposals to allow consideration of all types of objective indicia under § 103 regardless of whether a consideration is technical or economic. Next, this part discusses how the important yet deficient “nexus” requirement can be modified to better balance competing interests.

A. *Secondary Considerations Have Probative Value in a Patentability Analysis*

While previous commenters have advocated for the total exclusion of secondary considerations from the obviousness analysis,⁸⁴ I believe they should still be considered due to their important probative value. From a public policy perspective, the patentability of an invention need not and should not be a purely technical inquiry. Sometimes, inventions or novel ideas may generate immense economic value, and such value often warrants patent protection, regardless of whether the claim is patentable from a technical perspective.⁸⁵ This is especially true when no other form of intellectual property protection appears viable.

⁸⁴ See, e.g., Whelan, *supra* note 17.

⁸⁵ See, e.g., *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc); *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1329 (Fed. Cir. 2016).

In theory, an easy approach to solve all problems related to the law on non-technical secondary considerations would be to simply disregard them altogether. After all, § 103 in its current form mandates a technical inquiry conducted by a POSITA. But this approach fails to account for the probative value of non-technical secondary considerations. Furthermore, it represents a drastic departure from the valuable, extensive jurisprudence that has been developed around secondary considerations.⁸⁶ Therefore, this Article does not consider the approach of abandoning secondary considerations viable. Instead, this Article proposes two realistic approaches below to allow proper evaluation of secondary considerations (especially economic considerations) under § 103.

B. Approach 1: Amending Statute to Expressly Allow All Types of Objective Indicia

As discussed above,⁸⁷ economic considerations should not be part of the obviousness analysis under § 103 in its current form. A first viable solution to this problem is simply to ask Congress to amend § 103 to expressly allow all types of objective indicia. For example, Congress can amend § 103 to read:

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

⁸⁶ *Supra* Part III.

⁸⁷ *Supra* Section III.C.

effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains[, or if objective indicia do not warrant such a patent]. Patentability shall not be negated by the manner in which the invention was made.⁸⁸

The amendment above adds the conditional inquiry “if objective indicia do not warrant such a patent” as an alternative condition to the existing obviousness analysis. The phrase “objective indicia” is chosen over “secondary considerations” because the amendment intends to clarify that objective indicia is on equal footing with—and not “secondary” to—the existing obviousness analysis. In other words, “objective indicia” would be an additional way of determining patentability, separate from the existing obviousness analysis. Furthermore, since the proposed “objective indicia” analysis does not recite any POSITA, § 103 can now properly consider evaluating patentability from the perspectives of other people such as business managers, patent litigators, and competitors.⁸⁹

Instead of amending § 103, Congress can alternatively enact a new statute to expressly allow all types of objective indicia. For example, a new section of 35 U.S.C. can read: “A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in § 102 if objective indicia do not warrant such a patent.” This new section is the same as the amendment above but does not contain the obviousness analysis.

⁸⁸ 35 U.S.C. § 103 (proposed amendment underlined).

⁸⁹ Whelan, *supra* note 17.

Between the choices of amending § 103 and enacting a new section, the former appears more desirable. First, amending § 103 avoids the unnecessary question of whether the existing jurisprudence on “objective indicia” would apply to the new section. Second, even though both choices essentially intend to achieve the same goal, amending § 103 is likely an easier legislative change to pass Congress, especially since courts already consider (albeit incorrectly) objective indicia as part of the § 103 analysis. For at least these reasons, amending § 103 is the better choice.

Nevertheless, amending § 103 still requires congressional action. Depending on the political atmosphere, it is sometimes difficult to achieve any legislative change. For example, if Republicans and Democrats are divided along party lines and there is no super majority, any legislative change would be difficult. Fortunately, this Article introduces an even simpler approach to enable proper consideration of objective indicia, discussed next.

C. Approach 2: Changing Case Law to Modify the POSITA Definition when Weighing Secondary Considerations

As discussed above,⁹⁰ courts currently consider a POSITA to be a technical person who understands the relevant technology, as opposed to non-technical persons such as business managers or lawyers.⁹¹ Typically, a POSITA is a researcher, a scientist, or an engineer. Consequently, § 103 cannot properly weigh patentability

⁹⁰ *Supra* Section III.C.

⁹¹ *Env'tl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 697 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984).

from the perspective of persons who do not qualify as a POSITA.

Considering the practical difficulties related to the proposed statutory amendment discussed above, courts could change case law concerning § 103 to properly weigh secondary considerations. It is not the courts' role to enact new legislation or change legislation contrary to Congress's intent, but when necessary and appropriate, courts have the authority and flexibility to change their interpretation of statutory language.⁹² Within § 103, courts can use case law to modify the definition of a POSITA. Specifically, a federal court, preferably the Supreme Court or the Federal Circuit, could modify the definition of a POSITA to broadly include non-technical persons who are relevant to the analysis of secondary considerations.

To prevent disruption of settled case law in “normal” obviousness analysis, it would be important for courts to limit the new POSITA definition to only the context of secondary considerations. In other words, the POSITA definition in the “normal” (that is, prior-art based) obviousness analysis should remain intact. Such caution can prevent misuse or abuse of the new POSITA definition in unwarranted circumstances (e.g., using a business manager's testimony to establish technical non-obviousness of an invention).

Interestingly, § 103 in its current form includes only one inquiry conducted by a POSITA. That means, when the modified POSITA definition applies (i.e., in the context of weighing secondary considerations), this POSITA's inquiry is the only inquiry, not a secondary inquiry.

⁹² Lee Epstein et al., *Judging Statutes: Thoughts on Statutory Interpretation and Notes for a Project on the Internal Revenue Code*, 13 WASH. U. J.L. & POL'Y 305 (2003).

Therefore, the modified POSITA definition can also remove the connotation that comes with the label “secondary.”

D. Comparing Approaches 1 and 2

First and foremost, both Approach 1 (legislative change) and Approach 2 (case law change) are viable options to allow the proper inclusion of secondary considerations within § 103. Both approaches allow the inclusion of all types of objective indicia, including economic considerations and technical considerations. Both approaches provide clarity that the consideration of objective indicia is not “secondary.” In essence, both approaches solve the lingering problem discussed above, where it is often unclear whether objective indicia are truly “secondary” or whether they are part of the prima facie obviousness analysis.⁹³

However, Approaches 1 and 2 each have pros and cons. On one hand, legislative change leaves the current “normal” obviousness analysis intact, while modifying the POSITA definition through case law creates the potential risk of misuse of the modified definition in improper contexts. On the other hand, Congress changing legislation is often far more difficult to accomplish than a court changing case law. There are other differences and implications, but this Article provides a useful starting point for discussion.

Weighing the pros and cons of both Approaches 1 and 2, I believe Approach 2 is preferable simply because it is more practical. It requires no congressional action. A

⁹³ *Supra* Section III.A.

court such as the Federal Circuit can use a single opinion to effectuate the necessary change.

E. Changing Case Law to Modify the Nexus Requirement

As discussed above,⁹⁴ there are practical problems associated with the current standard. For example, when weighing commercial success, the nexus requirement means that a commercial product must embody a patented claim. This requirement, despite its merits, is sometimes at odds with the reality of how inventions are implemented and how patent applications are prosecuted.⁹⁵

To remedy the shortcomings of the current nexus requirement, this Article proposes a slight modification of the current nexus requirement. Specifically, this Article proposes a nexus between secondary considerations and *an initially-filed, allowable claim*, rather than an eventually-issued patent claim that may take years to obtain. Specifically, the initially-filed, allowable claim is one that is (1) included on the effective filing date of a patent application; and (2) not rejected by the USPTO under § 102 or § 103. This modification appears subtle but can lead to significant benefits. As discussed below, (1) is the main purpose of the proposed modification to reduce complexity, uncertainty, and transactional costs,⁹⁶ while (2) is necessary to prevent potential abuse of the modified nexus standard.⁹⁷ As far as I know, this proposal has not appeared elsewhere.

⁹⁴ *Supra* Section III.E.

⁹⁵ *See, e.g.,* Bosch Auto. Serv. Sols., LLC v. Matal, 878 F.3d 1027, 1036–38 (Fed. Cir. 2017).

⁹⁶ *Infra* Section IV.E.1.

⁹⁷ *Infra* Section IV.E.2.

This part uses commercial success as an example secondary consideration to demonstrate why the modified nexus requirement works better. When weighing commercial success, the modified nexus requirement means that a commercial product should embody an initially-filed, allowable claim, rather than an eventually-issued claim.

1. The Modified Nexus Reduces Complexity, Uncertainty, and Transactional Costs

As discussed above,⁹⁸ due to various reasons including time delay, information gap, personnel change, and transactional cost, it is often difficult to ensure seamless communication among all persons at all times. This reality, in turn, makes it difficult to ensure that an eventually-successful commercial product will embody an eventually-issued patent claim. The modified nexus requirement alleviates most (although not all) of these concerns.

The modified nexus deals with a claim that is included on the effective filing date of a patent application, rather than an eventually-issued claim. This modification matters because of time difference. Typically, patent claims are prepared not too long after an inventor has completed the invention. The inventor still remembers all details of the invention, including how it is to be embodied in a product. This is preferable over the alternative, current scenario: sometimes, since patent prosecution may take several years, an inventor simply forgets details of how his or her invention was to be implemented in a product.

The fact that the product may be unavailable for sale until years after the patent filing date is no longer a

⁹⁸ *Supra* Section III.E.

concern because the nexus now only concerns the initially-filed claim. Post-filing technical changes matter less because the product team now only needs to make sure that the product embodies the initially-filed claims. In addition, the product team no longer needs to make potential changes to accommodate new claim features added during patent prosecution. This will reduce transactional costs.⁹⁹

When patent claims are being prepared for filing, parties involved in the patent process often enjoy the period of greatest communication. The inventor, in-house counsel, and the patent practitioner are communicating freely and frequently in an effort to produce the best patent application. Information gaps are not eliminated, but they are minimized.

The modified nexus requirement reduces the complexity and cost of patent prosecution. After filing an application, outside counsel no longer needs to check with an inventor or in-house counsel every time the outside counsel introduce a new amendment to overcome prior art. There can be less communication between an inventor and outside counsel during prosecution, which reduces not only transactional costs but also the risk of unnecessarily exposing the inventor to a competitor's patent.¹⁰⁰ The outside counsel has less pressure to record everything that occurs during patent preparation and prosecution. Over time, that translates into a lower budget for clients.

The modified nexus requirement also reduces uncertainty around personnel changes. It no longer matters if a patent prosecutor is not the person who drafted the original claims, or if the inventor or the in-house counsel

⁹⁹ Quinn, *supra* note 83.

¹⁰⁰ *Supra* note 81.

has left the company. In other words, during prosecution, it is now okay if no person remains intimately familiar with the correlation between the original claims and the relevant product because the modified nexus only deals with the original claims.

2. The Modified Nexus Contains a Safeguard Against Potential Abuse

The modified nexus standard also defines an initially-filed, allowable claim to be one *not rejected by the USPTO under § 102 or § 103* (the “no-rejection” requirement). This requirement is an attempt to prevent potential abuse of the modified nexus standard. For example, a company may intentionally include overly broad claims in a patent application. The claimed features may be so broad that they are embodied in the company’s existing products. The claims may be subsequently rejected by the USPTO under § 102 or § 103 over prior art. But even so, without the no-rejection requirement, the company can potentially use the commercial success of its existing products to establish the patentability of the initially-filed claims. The no-rejection requirement prevents the abuse by requiring the initially-filed claims to have technical merits over the prior art.

The no-rejection requirement recites “§ 102 or § 103” but no other sections for good reason. The purpose is to still allow minor claim amendments during prosecution, for example, to overcome formal objections or rejections raised in § 112.¹⁰¹ This approach recognizes the reality of patent prosecution where certain errors are common and correction should be allowed.

This Article recognizes that the modified nexus standard requires allowable subject matter to be not only

¹⁰¹ 35 U.S.C. § 112 (2012).

disclosed but affirmatively claimed in an initially-filed application. In the current nexus standard, allowable claim subject matter needs to be disclosed in the application but can be added into claims during prosecution. On one hand, the modified standard encourages the good practice of including all allowable subject matter in the original application. On the other hand, the modified standard does increase uncertainties where a patent examiner rejects all initially-filed claims, and an applicant has now lost his or her opportunity to establish secondary considerations for this application. In the end, it comes down to a choice of priorities, and this Article suggests that the benefits of the modified nexus requirement outweigh its potential downsides. In addition, if an invention is truly novel, and if an applicant includes as many possible identifiable novel features into the initially-filed application, the applicant can minimize this risk.

V. CONCLUSION

This Article summarizes the current state of law regarding secondary considerations in the context of an obviousness analysis. It identifies various problems associated with the current law, including uncertainty regarding whether secondary considerations are actually “secondary,” the improper inclusion of non-technical considerations into § 103, as well as the deficient “nexus” requirement that often fails to reflect the reality of innovation and patent prosecution.

More importantly, this Article proposes solutions to address these problems. Specifically, to allow proper inclusion of objective indicia, a first approach is to amend statutes to expressly allow all types of objective indicia, and a second approach is to change case law to modify the definition of a POSITA when weighing objective indicia.

The second approach is more practical because it requires no congressional action. Regarding the difficult issue of “nexus,” this Article proposes a slight modification to its definition such that the nexus would exist between secondary considerations and an initially-filed, allowable claim, rather than an eventually-issued claim. The modified nexus requirement can effectively reduce the complexity, uncertainty, and transactional costs incurred during product implementation and patent prosecution. The modified nexus requirement also has a safeguard against potential abuse.