

# Patent Claim Anti-Dissection

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## I. INTRODUCTION

When should judges have the power to dissect patent claim language—or ignore it altogether—in applying patent doctrine?

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For at least a generation, it has been an article of faith that a patent's claims constitute the reference point for nearly all substantive patent law analysis. Judge Rich memorably averred that "the name of the game is the claim."<sup>1</sup> Abundant Federal Circuit caselaw supports his cogent aphorism.<sup>2</sup> As former Chief Judge Mayer of the Federal Circuit remarked, "to decide what the claims means is nearly always to decide the case."<sup>3</sup>

But the name of the game isn't always the claim in modern patent law, Judge Rich notwithstanding. For example, the Supreme Court's controversial *Alice* test invites courts to, first, abstract from the claim language to figure out what the invention "really" is (at least in the subjective mind of a judge)<sup>4</sup> and then to dissect claims into subcomponents to hunt for the presence of an "inventive concept" in determining subject matter eligibility.<sup>5</sup> And the *Alice* test is by no means the lone example of courts diverging from the claims; courts sideline the claims in areas such as patent exhaustion, obviousness secondary considerations, and enablement.<sup>6</sup>

Some scholars have applauded the practice of selective divergence. Oskar Liivak, for one, has decried the "cult of the claim" and has recommended that courts instead focus on the exogenous invention as it relates to what is written in the patent claim.<sup>7</sup> Mark Lemley has argued that many of these divergences cohere around the principle of the "point of novelty."<sup>8</sup> One chief argument is that claim drafters can

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<sup>1</sup> Giles S. Rich, *The Extent of the Protection and Interpretation of Claims-American Perspectives*, 21 INT'L REV. INDUS. PROP. & COPYRIGHT L., 497, 499 (1990) ("To coin a phrase, *the name of the game is the claim.*").

<sup>2</sup> [cites]

<sup>3</sup> *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 989 (Fed. Cir. 1995) (en banc) (Mayer, J., concurring in the judgment).

<sup>4</sup> See Timothy R. Holbrook & Mark D. Janis, *Relative and Absolute Patentability*, 59 WAKE FOREST L. REV. 641, 659-60 (2024) (discussing the "liberties" courts take with the claim language in § 101 assessments); see, e.g., *In re Killian*, 45 F.4th 1373, 1379 (Fed. Cir. 2022) (analyzing the "thrust" of the claims).

<sup>5</sup> *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014). Under the two-step *Alice* test, the court must first "determine whether the claims at issue are directed to a patent-ineligible concept," and, if this step is satisfied, then the court must "consider the elements of each claim...to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application" by adding an "inventive concept" that is "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself." *Id.* at 217-18. To be sure, *Alice* step two also gestures to analyzing the claim components both individually and "as an ordered combination," steps as an "ordered whole," but it is not clear how meaningful this latter limitation is in practice. [cite]

<sup>6</sup> See *infra* Part \_\_\_\_.

<sup>7</sup> Oskar Liivak, *Rescuing the Invention from the Cult of the Claim*, 42 SETON HALL L. REV. \_\_\_\_ (2012).

<sup>8</sup> Mark A. Lemley, *Point of Novelty*, 105 NW. U. L. REV. 1253 (2012).

more readily game the patent system if patent doctrines are shackled to the terms and claiming approaches that drafters have chosen.<sup>9</sup>

In this Article, we take the contrary approach. We argue that the claims *should* be king in patent law. If there is a cult of the claim, we have drunk the Kool-Aid. In Part I, we examine the most potent of the rules mandating obedience to the claims—the all-elements rule. We trace the evolution of the all-elements rule in both patent validity and patent infringement doctrines, examining in particular the reasons for the Federal Circuit’s enthusiastic embrace of the rule shortly after the court was created. In Part II, we catalogue instances of divergence and critique the practice of selective divergence from the claims as costly, subjective, and the source of incoherence. In Part III [make a normative proposal.] More provocatively, we argue that patent doctrine should be designed with the understanding that an inevitable secondary effect of a substantive patent law rule is to stimulate innovative approaches to claim drafting that circumvent or mitigate the rule. Rather than lamenting this phenomenon as inappropriate gaming, we should understand the exercise of developing patent doctrine as one of facilitating efficient and innovative claim drafting, subject to common-sense guardrails that seek to channel claim drafting efforts towards the service of systemic goals.

## II. THE FEDERAL CIRCUIT’S REVOLUTION IN CLAIM PRIMACY

The US patent system’s history of transitioning to peripheral claiming through the use of claims is well-known.<sup>10</sup> Claims act like a fence, demarcating the outer limits of the patentee’s exclusive rights.<sup>11</sup> Before the creation of the Federal Circuit, however, the treatment of claims varied widely across the courts of appeals. The Federal Circuit made claims the central feature of the patent system and emphasized their peripheral nature. The Supreme Court, after a period of disengagement with patent law following the creation of the Federal Circuit,<sup>12</sup> seemingly emphasized the role of the claim and the essentiality of the claim limitations. This section explores the doctrines that demonstrate the crucial role played by the claims.

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<sup>9</sup> See, e.g., *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 629–30 (2008) (“By characterizing their claims as method instead of apparatus claims, or including a method claim for the machine’s patented method of performing its task, a patent drafter could shield practically any patented item from exhaustion.”).

<sup>10</sup> See Dan L. Burk & Mark A. Lemley, *Fence Posts or Sign Posts? Rethinking Patent Claim Construction?*, 157 U. Pa. L. Rev. 1743, 1746–48 (2009); Jeanne C. Fromer, *Claiming Intellectual Property*, 76 U. CHI. L. REV. 719, 731–35 (2009).

<sup>11</sup> See, e.g., *Gen. Elec. Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 369 (1938) (“The claims ‘measure the invention.’”); *Cont’l Paper Bag Co. v. E. Paper Bag Co.*, 210 U.S. 405, 419 (1908) (“The invention, of course, must be described and the mode of putting it to practical use, but the claims measure the invention.”).

<sup>12</sup> See generally Mark D. Janis, *Patent Law in the Age of the Invisible Supreme Court*, 2001 U. ILL. L. REV. 387 (2001).

A. *The Federal Circuit’s Embrace of the All-Elements Rule in Relative Validity Doctrines of Novelty and Non-Obviousness*<sup>13</sup>

The Federal Circuit’s embrace of the all-elements rule for infringement is well-known (and we will briefly discuss it below), what is less well appreciated is the parallel evolution on the anticipation side. It is axiomatic (at least today) that a claim is anticipated only if a single reference provides an enabling disclosure, expressly or inherently, of every element of the claim, arranged as in the claim.<sup>14</sup> This emphatic embrace of the claims as the point of reference for the anticipation inquiry is second nature to those who are immersed in the patent law of the Federal Circuit era. But if we view the law of anticipation through a wider historical lens, it becomes evident that the Federal Circuit’s formulation of the anticipation test diverges from pre-Federal Circuit statements of the law, perhaps to an extent that transcends mere semantics.

Writing in 1890, Professor Robinson approached the anticipation analysis in a manner that would not be recognizable today. Although Robinson called the patent claim “the life of the patent so far as the rights of the inventor are concerned”<sup>15</sup> and averred that “by it the letters-patent...must stand or fall,”<sup>16</sup> he advocated an anticipation analysis that was not tightly bound to the claims. Robinson’s anticipation analysis rested on identity between the invention and the prior art, but analyzing identity required the court to consider the “essential character” of the invention as the frame of reference (which we understand to be distinct, potentially, from the words of a claim).<sup>17</sup> The invention (or specifically its “essential character”) and the prior art must be “identical in substance” for anticipation to occur, and this could only occur where the two were are “identical in effect, in function, and in the means by which their functions are performed.”<sup>18</sup>

Robinson left no doubt what he meant by referring to this rhetoric of function, means, and effect: he was incorporating a doctrine of equivalents into the anticipation analysis. He devoted an entire section of his anticipation discussion to the topic, entitling it ““Of the Novelty of Inventions: Identity: The

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<sup>13</sup> See Timothy R. Holbrook & Mark D. Janis, *Relative and Absolute Patentability*, 59 WAKE FOREST L. REV. 641, 651-55 (2024).

<sup>14</sup> See *Sage Prods. LLC v. Stewart*, 133 F.4th 1376, 1380 (Fed. Cir. 2025) (“A claim is anticipated if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference”), quoting *Arbutus Biopharma Corp. v. ModernaTX, Inc.*, 65 F.4th 656, 662 (Fed. Cir. 2023); *Arbutus*, 65 F.4th at 662 (anticipation requires an enabling disclosure, but does not require that the prior art subject matter be reduced to practice); *Incept LLC v. Palette Life Sciences, Inc.*, 77 F.4th 1366, 1371 (Fed. Cir. 2023) (“[A] prior art reference will anticipate a patent claim if it discloses all of the limitations of the claim ‘arranged or combined in the same way as in the claim’”), quoting *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369–70 (Fed. Cir. 2008).

<sup>15</sup> WILLIAM C. ROBINSON, II ROBINSON ON PATENTS 111 (§505) (1890).

<sup>16</sup> *Id.*

<sup>17</sup> I ROBINSON at 318-19 (§ 236).

<sup>18</sup> *Id.*

Doctrine of Equivalents.”<sup>19</sup> Applying this analysis to “combination” inventions (to choose an example that seems most pertinent for current practice), the requirement for identity in substance would be met where “every element” in the invention was represented by at least “an equivalent element” in the prior art reference, “so that a complete interchange of elements would work no alteration in the functions of the combination or its co-operative law” by which the combination as a whole operated.<sup>20</sup>

Robinson’s approach might be explained away as a conflation of anticipation and obviousness, particularly given the fact that Robinson was writing long before the 1952 codification of obviousness, and his treatise contains no separate discussion of obviousness (or “want of invention”) and only passing reference to the Supreme Court’s seminal *Hotchkiss* decision.<sup>21</sup> But the caselaw in the succeeding decades explicitly tied equivalency into the anticipation analysis, and this rhetorical tradition persisted long after 1952.<sup>22</sup>

Thus, Judge Markey was not merely reiterating settled pre-Federal Circuit era law when he wrote in 1983 in *Connell*<sup>23</sup> that “[a]nticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim,”<sup>24</sup> rejecting the lower court’s assertion that “‘if the general aspects are the same and the differences in minor matters is only such as would suggest itself to one of ordinary skill in the art.’”<sup>25</sup> Likewise Judge Nies, when she ruled two years later that a jury instruction was erroneous in that it permitted the jury to find anticipation if the prior art discloses “substantially the same thing[]” as the claimed invention.<sup>26</sup>

Markey and Nies were rejecting the longstanding rhetorical tradition of incorporating a doctrine of equivalents into anticipation—although they were doing so with a measure of subterfuge. In *Connell*, Judge Markey purported to draw the strict all-elements approach to anticipation from a Court of Claims decision, *Soundscriber*.<sup>27</sup> But *Soundscriber* does not adopt the rule that Judge Markey propounded. The Court of Claims (adopting verbatim the report of the trial commissioner) had asserted that “[t]o constitute an anticipation, all of the

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<sup>19</sup> *Id.* at Book I, ch. 2, Section III pp. 334 et seq (§§ 245 et seq).

<sup>20</sup> *Id.* at 389 (§ 282).

<sup>21</sup> *Hotchkiss v. Greenwood*, 52 U.S. 248 (1850), regarded as the foundation of Supreme Court jurisprudence on the obviousness criterion.

<sup>22</sup> *See infra* nn. \_\_\_\_.

<sup>23</sup> *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983).

<sup>24</sup> *Id.* at 1548.

<sup>25</sup> *Id.*, quoting *Connell v. Sears, Roebuck & Co.*, 559 F.Supp. 229, 234 (N.D. Ala. 1983). Markey’s comments appear in a portion of his opinion in which he extensively catalogued errors appearing in the trial court’s lengthy opinion, explaining that “the uniformity imperative that informed the creation of this court impels a short discussion of some statements appearing in the opinion.” *Connell*, 722 F.2d at 1548.

<sup>26</sup> *Jamesbury Corp. v. Litton Indus. Prods., Inc.*, 756 F.2d 1556, 1560 (Fed. Cir. 1985) (pointing out that the Federal Circuit had already ruled on the point in *Connell*).

<sup>27</sup> *Connell*, 722 F.2d at 1548, citing *Soundscriber Corp. v. U.S.*, 360 F.2d 954, 960 (Ct.Cl.1966).

elements recited in the claim *or their equivalents* must be found in one unit of the prior art.”<sup>28</sup> And *Soundsciber* does not contain the “arranged as in the claim” requirement, either.<sup>29</sup>

Significantly, the caselaw relied on in *Soundsciber* recited the equivalency language and made clear that the language was part of the calculus of anticipation, not merely a reference to obviousness doctrine. *Soundsciber* recited the Sixth Circuit’s *Firestone* decision<sup>30</sup> for the equivalency language. In a companion decision to *Firestone*, the Sixth Circuit explained that

Anticipation belongs in the field of novelty. To anticipate an invention is to negative novelty; but even though a patent is not anticipated, and is concededly novel, it may lack invention. In order to anticipate an invention, it is necessary that all of the elements of the invention or their equivalents be found in one single description or structure, where they do substantially the same work in substantially the same way.<sup>31</sup>

The Sixth Circuit was by no means alone in relying on this equivalency formulation. Decisions from the Fourth,<sup>32</sup> Eighth,<sup>33</sup> and Tenth<sup>34</sup> Circuits parroted the substantial sameness language, as did the Walker treatise.<sup>35</sup> Some basis for the language appears in at least one Supreme Court anticipation decision.<sup>36</sup>

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<sup>28</sup> *Soundsciber Corp.*, 360 F.2d at 960 (emphasis supplied) (quoting Trial Commissioner Lane’s report).

<sup>29</sup> On the dubious pedigree of the arranged-as-in-the-claim requirement, see Timothy R. Holbrook, *Patent Anticipation and Obviousness As Possession*, 65 EMORY L.J. 987, 1012-19 (2016). Robinson may hint at such a concept. I ROBINSON at 327 (§ 242) (observing that the “arrangement of the parts of an invention...sometimes expresses an essential characteristic” of the invention, such that “diversities of arrangement” between the prior art and the invention may be relevant to the novelty inquiry).

<sup>30</sup> *Firestone v. Aluminum Co. of America*, 285 F.2d 928 (6th Cir. 1960).

<sup>31</sup> *Aluminum Co. of America v. Sperry Prods., Inc.*, 285 F.2d 911, 917 (6th Cir. 1960), *quoting* *Allied Wheel Prods. v. Rude*, 206 F.2d 752, 760 (6th Cir. 1953).

<sup>32</sup> *Imperial Bottle Cap & Mach. Co. v. Crown Cork & Seal Co.*, 139 F. 312, 320 (4th Cir. 1905) (stating that “a patent for the combination...is only truly anticipated by a prior device having identically the same elements, or their mechanical equivalents, co-operating to produce the same results.”)

<sup>33</sup> *Ottumwa Box Car Loader Co. v. Christy Box Car Loader Co.*, 215 F. 362, 369 (8th Cir. 1914) (stating that “[i]t is indispensable that all of [the components of the invention], or their mechanical equivalents, be found in the same description or machine, where they do substantially the same work by the same means.”)

<sup>34</sup> *Dow Chemical Co. v. Williams Bros. Well Treating Corp.*, 81 F.2d 495, 501 (10th Cir. 1936)

<sup>35</sup> \_\_\_\_\_ **WALKER ON PATENTS § 91 (19 )** (“Therefore in order to negative novelty or as it is usually expressed, to ‘anticipate’ an invention, it is necessary that all of the elements of the invention or their equivalents be found in one single description or structure where they do substantially the same work in substantially the same way.”)

<sup>36</sup> *Bates v. Coe*, 98 U.S. 31, 42 (1878) (commenting that in analyzing the defense of anticipation, courts find that “a thing is substantially the same as another, if it performs substantially the same function or office in substantially the same way to obtain substantially the same result”).

The Federal Circuit's shift, exemplified by early opinions from Markey and Nies, deserves more attention than scholars have given it. The embrace of an all-elements approach for anticipation, combined with the principle that there is no immaterial element in a claim,<sup>37</sup> is a significant elevation of the importance of the claim language in comparison to the pre-Federal-Circuit era equivalency approach to anticipation. One of us has argued that the young Federal Circuit was creating a strict line between anticipation and obviousness, channeling issues of supposed equivalency into the obviousness inquiry.<sup>38</sup> Yet the Federal Circuit also made clear in those early years that obviousness is not the same thing as equivalency.<sup>39</sup> The language of equivalency disappears from any analysis of patent validity, marking a significant rhetorical, if not substantive, shift in doctrine.

### *B. The Federal Circuit's Parallel Move in Infringement*

The shift on novelty is not as well remembered as that the court made on the infringement side of the ledger. The standard for literal infringement was fairly consistent before the Federal Circuit became the sole court of appeals for patent infringement suits.<sup>40</sup> The Federal Circuit's early cases did not move the ball much in this regard other than to create a clear divide between claim construction and infringement.<sup>41</sup> In so doing, the Federal Circuit jettisoned juries from the process of claim construction. In *Markman v. Westview Instruments, Inc.*, the Federal Circuit declared claim construction a question of law, which removed any hint of a right to a jury trial on the matter.<sup>42</sup> The Supreme Court agreed, removing

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<sup>37</sup> This principle is most often stated in connection with the use of the all-elements rule in infringement determinations. See *infra* nn. \_\_\_\_.

<sup>38</sup> Holbrook, *Patent Anticipation*, *supra* note [x], at 1015 (“*Connell* is clearly an effort by the Federal Circuit to unify the disparate approaches to anticipation and obviousness that existed in the regional circuits.”).

<sup>39</sup> In *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 941 (Fed. Cir. 1987) (en banc) the majority established the all-elements rule for the doctrine of equivalents. *Id.* at \_\_\_\_ Conspicuously did not use the language “obvious or exact” equivalent in the majority decision, notwithstanding the dissent’s express utilization of that language. See *id.* at 941-42 (Bennett, J., dissenting-in-part). The court subsequently made clear that obviousness and equivalency are distinct. See *Siemens Med. Sols. USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc.*, 637 F.3d 1269, 1279-83 (Fed. Cir. 2011). The separate patentability of an accused equivalent device is relevant evidence of non-equivalence, but it is not determinative. *Id.* at 1280-81. The courts no longer discuss obvious variants in the context of the doctrine of equivalents, nor does language of equivalents appear in obviousness cases, showing the Federal Circuit’s separation of these doctrines is now complete.

<sup>40</sup> See, e.g., *Union Water-Meter Co. v. Desper*, 101 U.S. 332, 335 (1879) (“It is a well-known doctrine of patent law, that the claim of a combination is not infringed if any of the material parts of the combination are omitted.”); *LaSalle v. Carlton's Laydown Serv., Inc.*, 680 F.2d 432, 433 (5th Cir. 1982) (no literal infringement because claim limitations missing in accused); *Gen. Dynamics Corp. v. Whitcomb*, 443 F.2d 630, 633 (4th Cir. 1971).

<sup>41</sup> *Hughes Aircraft Co. v. U.S.*, 717 F.2d 1351, 1361 (Fed. Cir. 1983)

<sup>42</sup> *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 971 (Fed. Cir. 1995) (en banc) (*Markman I*), *aff'd*, 517 U.S. 370 (1996) (*Markman II*).

the jury from claim construction.<sup>43</sup> Subsequently, however, the Supreme Court concluded that there remained factual issues underlying claim construction, even though those issues remain for the judge and not the jury.<sup>44</sup> Judicial control over claim construction is important because, as Judge Mayer noted in his concurrence in *Markman*, “to decide what the claims mean is nearly always to decide the case.”<sup>45</sup>

Literal infringement is not the only way to infringe a claim, however. Under the doctrine of equivalents, there can still be infringement if the accused device is “close enough” to be considered effectively the same invention. The Supreme Court justified this approach to infringement in order to avoid infringers from gaming the system by making minor changes to the invention:

[T]o permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant into a hollow and useless thing .... It would deprive him of the benefit of his invention and would foster concealment rather than disclosure of inventions, which is one of the primary purposes of the patent system.<sup>46</sup>

For years, it was unclear whether to apply the doctrine of equivalents to the invention as a whole, ignoring or minimizing the importance of the claim elements, or to each claim limitation.<sup>47</sup> The regional courts seemingly assessed equivalency on a holistic approach, looking at the invention as a whole. By contrast, the Court of Claims, the Federal Circuit’s predecessor, did emphasize the claim limitations.<sup>48</sup>

The Federal Circuit in its early years appeared split on the issue, or at least inconsistent.<sup>49</sup> For example, the Federal Circuit concluded it was legal error to “fail[] to apply the doctrine of equivalents to the claimed invention as a whole”

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<sup>43</sup> *Markman II*, 517 U.S. at 372.

<sup>44</sup> *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 322 (2015).

<sup>45</sup> *Markman I*, 52 F.3d at 989 (Mayer, J., concurring in the judgment).

<sup>46</sup> *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*, 339 U.S. 605, 607 (1950); *see also Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002) (“If patents were always interpreted by their literal terms, their value would be greatly diminished.

Unimportant and insubstantial substitutes for certain elements could defeat the patent, and its value to inventors could be destroyed by simple acts of copying.”).

<sup>47</sup> *See, e.g., LaSalle v. Carlton's Laydown Serv., Inc.*, 680 F.2d 432, 434 (5th Cir. 1982)

<sup>48</sup> *Interdent Corp. v. United States*, 531 F.2d 547, 552 (Ct. Cl. 1976) (Thus, the omission of any one of the elements of the claimed combination avoids infringement.”). The court seemed to be applying prosecution history estoppel. *Id.*

<sup>49</sup> Maxim H. Waldbaum & David Sipiora, *Pennwalt Redux--Judicial Uncertainty vs. Procrustean Bed*, 19 AIPLA Q.J. 237, 251 (1991) (“The passion of the rhetoric and the fundamental nature of the disagreements between the two sides in *Pennwalt* underscore the depth of the divisions in the court on the issue.”).



and to require the presence of “‘obvious and exact’ equivalents of two elements the presence of which would have effectively produced literal infringement.”<sup>50</sup> Similarly, the Federal Circuit later characterized equivalence as “involve[ing] a determination of whether the claimed invention and alleged infringing device, which are different (there would otherwise be literal infringement), perform substantially the same function in substantially the same way to give the same or substantially the same result.”<sup>51</sup> Such language suggests an overall comparison between the claim and the accused device.

In other contexts, however, the court noted the importance of the claim limitations. In *Lemelson v. United States*, the court made the stated (clearly in conflict with the above language, that “[i]t is also well settled that each element of a claim is material and essential, and that in order for a court to find infringement, the plaintiff must show the presence of every element or its substantial equivalent in the accused device.”<sup>52</sup> The court also walked back the language in *Hughes Aircraft* to emphasize the role of the claim limitations even under the doctrine of equivalents, noting that the “as a whole” language “should not be interpreted as sanctioning the treatment of claim limitations as insignificant or immaterial in determining infringement.”<sup>53</sup> The court then emphasized that a substituted element must satisfy the function-way-result test.<sup>54</sup>

The Federal Circuit eventually resolved this internal inconsistency by adopting a rule that applied the doctrine of equivalents to each limitation of the claim. In making this move en banc, the court gestured to the comparing the claim overall to the invention, but then emphasized the need to consider the claim limitations:

Under the doctrine of equivalents, infringement *may* be found (but not necessarily) if an accused device performs substantially the same overall function or work, in substantially the same way, to obtain substantially the same overall result as the claimed invention. That formulation, however, does not mean one can ignore claim limitations.<sup>55</sup>

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<sup>50</sup> *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1364 (Fed. Cir. 1983).

<sup>51</sup> *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 900 (Fed. Cir. 1984). The Federal Circuit was addressing the issue in light of a prior Ninth Circuit decision in the case rendered before the Federal Circuit’s creation. *Id.* at 900-01. *See also* *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 961-62 (Fed. Cir. 1983).

<sup>52</sup> *Lemelson v. United States*, 752 F.2d 1538, 1551 (Fed. Cir. 1985).

<sup>53</sup> *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1532-33 (Fed. Cir. 1987).

<sup>54</sup> *Id.*

<sup>55</sup> *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934-35 (Fed. Cir. 1987) (en banc), *disapproved of by on other grounds in*, *Cardinal Chem. Co. v. Morton Int’l, Inc.*, 508 U.S. 83 (1993).

The court emphasized that the doctrine of equivalents cannot “erase a plethora of meaningful structural and functional limitations of the claim on which the public is entitled to rely in avoiding infringement.”<sup>56</sup>

While this decision may have been controversial to some at the time,<sup>57</sup> the Supreme Court ultimately adopted the “all elements rule,” noting that “[e]ach element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole.”<sup>58</sup> If the theory of equivalents would vitiate a claim limit, then there cannot be infringement under the doctrine of equivalents as a matter of law.<sup>59</sup>

The Federal Circuit has interpreted the all-elements rule strictly, even applying it not only to terms in a claim itself but also to constructions of such terms.<sup>60</sup> The court’s strict application have lead many to call the doctrine dead,<sup>61</sup> although the court has on occasion found infringement by equivalents.<sup>62</sup>

Thus in both literal infringement and infringement by equivalents, the Federal Circuit (and the Supreme) have embraced the all-elements rule.

### *C. The Federal Circuit Effectively Embraces an All Elements Approach to Obviousness*

The Federal Circuit’s expulsion of the substantial similarity analysis from anticipation—that is, its insistence on anchoring the anticipation analysis in the claim through an all-element rule—might have been less significant had the court merely shifted the substantial similarity rule to obviousness. But this did not occur. Instead, the Federal Circuit likewise moored the obviousness analysis to

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<sup>56</sup> *Id.* at 935 (quoting *Perkin-Elmer*, 822 F.2d at 1532-33).

<sup>57</sup> Maxim H. Waldbaum & David Sipiora, *Pennwalt Redux--Judicial Uncertainty vs. Procrustean Bed*, 19 AIPLA Q.J. 237, 251 (1991)

<sup>58</sup> *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997).

<sup>59</sup> *Id.* at 39 n.8.

<sup>60</sup> *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1321 (Fed. Cir. 2003). The Federal Circuit construed the claim for a wheel speed to vary “sinusoidally” to require it slow to zero and then spin in the opposite direction to a maximum, and then repeat. The accused device’s wheel varied sinusoidally but did not pass through zero. The court found that the “sinusoidally” limitation was missing as a result, even though nothing in the claim language itself stated that the wheel must pass through zero.

<sup>61</sup> John R. Allison & Mark A. Lemley, *The (Unnoticed) Demise of the Doctrine of Equivalents*, 59 *Stan. L. Rev.* 955, 956 (2007).

<sup>62</sup> *See, e.g.*, *Bio-Rad Lab’ys, Inc. v. 10X Genomics Inc.*, 967 F.3d 1353, 1368 (Fed. Cir. 2020); *UCB, Inc. v. Watson Lab’ys Inc.*, 927 F.3d 1272, 1286 (Fed. Cir. 2019); *Cadence Pharms. Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364, 1370 (Fed. Cir. 2015).

the claims, reading the statutory reference to the “claim as a whole” to mandate this approach. The court elevated *Graham v. John Deere* as establishing the test for obviousness,<sup>63</sup> generally ignoring the intervening Supreme Court cases addressing obviousness.<sup>64</sup>

A few early decisions illustrate the point. In *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*,<sup>65</sup> the court rejected as erroneous an obviousness analysis that was tethered to the supposed “gist” of the invention. In *Bausch & Lomb v. Barnes-Hind/Hydrocurve, Inc.*,<sup>66</sup> the Federal Circuit rejected the district court’s obviousness analysis where that analysis was based on the “concept” of the invention and ignored claim limitations of the claim.<sup>67</sup> In *Jones v. Hardy*,<sup>68</sup> the Federal Circuit critiqued the district court for substituting the “advantage” of the invention for the claim, and in *Panduit Corp. v. Dennison Mfg. Co.*,<sup>69</sup> the Federal Circuit ruled that it was impermissible for the district court to have transformed the claimed invention into a single-term solution to a problem and to have based its obviousness analysis on that term.

The Federal Circuit effectively embraced an all-elements requirement for obviousness. The absence of one limitation from the combination of prior art references renders the claim non-obvious. There are some safety valves, such if the missing limitation is inherent in the prior art or if common sense could be used to fill the gap.<sup>70</sup> But, generally, the Federal Circuit has applied a strict all-elements rule to the obviousness inquiry as well. The converse is not true: the presence of all limitations in the prior art does not mean the claim is obvious.<sup>71</sup>

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<sup>63</sup> See *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1379 (Fed. Cir. 1983) (“Accordingly, we must refer to *Graham v. John Deere Co.*, 383 U.S. 1(1966), which establishes the test for obviousness.”), *abrogated by on other grounds*, *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276 (Fed. Cir. 2011) (en banc).

<sup>64</sup> The cases rarely cited by the Federal Circuit are *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976); *Dann v. Johnston*, 425 U.S. 219 (1976); and *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969). The Federal Circuit has cited *Sakraida* a total of fourteen times, *Dann* nine times, and *Anderson's-Black Rock* six times. In contrast, it cited *Graham* 683 times as of this writing.

<sup>65</sup> 721 F.2d 1540 (Fed. Cir. 1983).

<sup>66</sup> 796 F.2d 443, 447-49 (Fed. Cir. 1986).

<sup>67</sup> In particular, the district judge had based the analysis on the “concept of forming ridgeless depressions having smooth rounded edges using a laser beam to vaporize the material,” whereas the claims at issue required that the product be “an ophthalmic lens formed of a transparent cross-linked polymer and that the laser marks be surrounded by a smooth surface of unsublimated polymer.” *Id.*

<sup>68</sup> 727 F.2d 1524, 1530 (Fed. Cir. 1984).

<sup>69</sup> 810 F.2d 1561 (Fed. Cir. 1987).

<sup>70</sup> *PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1194-96 (Fed. Cir. 2014) (inherency); *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1330 (Fed. Cir. 2009) (common sense).

<sup>71</sup> See, e.g., *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*, 617 F.3d 1296, 1303 (Fed. Cir. 2010) (“In combination, Horn and Lund teach all of the limitations of the claims.... But it is not enough to simply show that the references disclose the claim limitations.”).

Other factors can impact that analysis, such as the absence of a teaching, suggestion, or motivation to combine,<sup>72</sup> as well as consideration of the secondary indicia of non-obviousness.<sup>73</sup> Nevertheless, in the general context of obviousness, the Federal Circuit has emphasize the centrality of the claims, eschewing any reference to “equivalents” to particular claim limits and requiring the presence in the aggregated prior art of all the limitations of the claim.

### III. COURTS’ DISREGARD FOR CLAIM LIMITATIONS IN OTHER CONTEXTS

The Federal Circuit has effectively adopted an all-elements rule in a variety of contexts, elevating the role of the patent claims. There are other times, however, where the claims at best represent a starting point or are at best tangential to the analysis of the enforceability or validity of a claim. The Supreme Court articulated much of this claim dissection. The Federal Circuit, however, has not been innocent in derogating the role of the claims, either by embracing their own form of dissection or by reading general rules of the Supreme Court far more robustly than necessary.<sup>74</sup> This Part explores the various doctrines where the claims are routinely ignored notwithstanding their centrality.

#### A. Patent Exhaustion

The articulation of patent exhaustion is easy, even if its application is not. As the Supreme Court has explained, “[t]he longstanding doctrine of patent exhaustion provides that the initial authorized sale of a patented item terminates all patent rights to that item.”<sup>75</sup> In general terms, if the patentee has been compensated for the sale of an embodiment of the invention, the patentee’s rights over that particular embodiment end, and the purchaser is free to use or resell the product.

The application of exhaustion, in contrast, has not been as simple. Early on, the Supreme Court made clear that a sale of something other than the claimed invention can trigger exhaustion, creating uncertainty about when exhaustion applies. The Court addressed the issue in *United States v. Univis Lens. Co.*, an antitrust case.<sup>76</sup> The patents at issue covered multifocal lenses, but what the

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<sup>72</sup> Apple Inc. v. Samsung Elecs. Co., 839 F.3d 1034, 1050 (Fed. Cir. 2016) (en banc).

<sup>73</sup> Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1304 (Fed. Cir. 2010). More on this *infra*.

<sup>74</sup> Timothy R. Holbrook, The Federal Circuit's Acquiescence(?), 66 Am. U. L. Rev. 1061, 1084 (2017).

<sup>75</sup> Quanta Computer, Inc. v. LG Elecs., Inc., 553 U.S. 617, 625 (2008); *see also* Impression Prods., Inc. v. Lexmark Int’l, Inc., 581 U.S. 360, 366 (2017) (“When a patentee sells one of its products..., the patentee can no longer control that item through the patent laws—its patent rights are said to ‘exhaust.’”).

<sup>76</sup> 316 U.S. 241 (1942). There were three classes of licenses at issue, covering a myriad of patents, *see id.* at 244-47, but those nuances are not germane to the discussion here.

patentee sold were lens blanks, “rough opaque pieces of glass of suitable size, design and composition for use, when ground and polished, as multifocal lenses in eyeglasses.”<sup>77</sup> What was sold, therefore, was not the patented invention but instead something that could be transformed into the claimed lenses.<sup>78</sup>

Even though the authorized sale was the lens blank and not the claimed invention, the Supreme Court nevertheless concluded that the relevant patents were exhausted. The Court reasoned that exhaustion applies to “the authorized sale of an article which is capable of use only in practicing the patent.”<sup>79</sup> The court reasoned that the lens blanks “embodi[ed] the essential features” of the patented invention, and the blanks were “to be finished by the purchaser in conformity to the patent,” resulting in exhaustion. The Court offered little guidance, however, as to how to assess whether an unpatented article embodies “essential features.”

The Supreme Court reaffirmed this approach to exhaustion more recently in *Quanta Computer, Inc. v. LG Elecs., Inc.*<sup>80</sup> Like *Univis*, LG’s licensee, Intel, sold parts that were not part of the patented invention; Intel’s customers combined the Intel products in a way that was infringing. Applying *Univis*, the Court reasoned that “LGE has suggested no reasonable use for the Intel Products other than incorporating them into computer systems that practice the LGE Patents. Nor can we discern one: A microprocessor or chipset cannot function until it is connected to buses and memory.”<sup>81</sup> The Court concluded that the “incomplete article substantially embodies the patent because the only step necessary to practice the patent is the application of common processes or the addition of standard parts.”<sup>82</sup>

The Court again failed to provide any guardrails as to when an invention “substantially embodies” the patented invention, although it may be gesturing to the well-known concept of lacking substantial non-infringing uses.<sup>83</sup> The Court

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<sup>77</sup> *Id.* at 244.

<sup>78</sup> *Id.* The Supreme Court assumed infringement of the relevant patents. *See Quanta*, 553 U.S. at 627 (“The Court assumed that the Univis patents containing claims for finished lenses were practiced in part by the wholesalers and finishing retailers who ground the blanks into lenses, and held that the sale of the lens blanks exhausted the patents on the finished lenses.”).

<sup>79</sup> *Univis*, 316 U.S. at 249.

<sup>80</sup> 553 U.S. 617 (2008). The Court also held that exhaustion applies to method claims, contrary to the Federal Circuit’s holding. *Id.* at 628-29.

<sup>81</sup> *Id.* at 632.

<sup>82</sup> *Id.* at 633.

<sup>83</sup> *See, e.g.*, 35 U.S.C. § 271(c); *see also* Timothy R. Holbrook, *Method Patent Exceptionalism*, 102 IOWA L. REV. 1001, 1052-53 (2017) (using “no substantial non-infringing uses” as toggle for infringement by making, selling, offering to sell, or importing patented methods).

articulated a fear that draftspersons would be able to avoid exhaustion by clever claim drafting.<sup>84</sup>

The Federal Circuit has embraced this departure from the claims,<sup>85</sup> including by refusing to apply exhaustion on a claim-by-claim basis and instead focusing instead on the patent as a whole.<sup>86</sup> The courts, therefore, have stepped away from the claims in assessing whether there was exhaustion.

### B. *Subject Matter Eligibility*

The Supreme Court has also decentralized the claim in assessing whether the claimed invention qualifies as patentable subject matter under 35 U.S.C. § 101. The Court embraced a two-step methodology for making that determination. At step one, a court is to determine whether the relevant claim is directed to an unpatentable law of nature, natural phenomena or abstract idea.<sup>87</sup> If the claim is deemed directed to one of the unpatentable categories, a court at step two asks nevertheless whether there is some “inventive concept” that transforms the claim into a patent-eligible application of the law of nature, natural phenomena, or abstract idea.<sup>88</sup> Merely applying the ineligible subject matter, nor the use of conventional steps, are inventive concepts sufficient to confer eligibility to an invention.

Because every invention at some level of use these unpatentable “building blocks,” the Court warned that courts should “tread carefully in construing this exclusionary lest it swallow all of patent law.”<sup>89</sup> The Federal Circuit could have used this caveat to interpret *Alice* and *Mayo* narrowly. But it hasn’t.<sup>90</sup> It has trampled all over the claim limitations. The court has made clear that claim

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<sup>84</sup> *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 630, 128 S. Ct. 2109, 2118, 170 L. Ed. 2d 996 (2008) (criticizing claim drafting as an impermissible “end-run around exhaustion”); *Keurig, Inc. v. Sturm Foods, Inc.*, 732 F.3d 1370, 1374 (Fed. Cir. 2013). This language mostly involved efforts to avoid exhaustion between method and apparatus claims, but the critique applies more broadly.

<sup>85</sup> *Keurig*, 732 F.3d at 1373-74 (sale of patented coffee brewing system also exhausts method claims).

<sup>86</sup> *Id.* at 1374; *but see id.* at 1375 (O’Malley, J., concurring in the judgment) (rejecting holding that exhaustion does not apply on a claim-by-claim basis).

<sup>87</sup> *Alice Corp. Pty. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014)

<sup>88</sup> *Alice*, 573 U.S. at 221; *Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66, 72–73 (2012).

<sup>89</sup> *Alice*, 573 U.S. at 217; *Mayo*, 566 U.S. at 71 (“The Court has recognized, however, that too broad an interpretation of this exclusionary principle could eviscerate patent law.”).

<sup>90</sup> *See Holbrook, Acquiescence, supra* note 74, at 1084-85 (noting the failure of the Federal Circuit to push back on eligibility of cell-free fetal DNA).

construction is not required prior to assessing eligibility<sup>91</sup> and, instead, has offered broad abstractions of the invention untethered to the claim limits.

Perhaps the most notorious example of this claim dissection is *American Axle & Manufacturing, Inc. v. Neapco Holdings LLC*.<sup>92</sup> The invention was a method for manufacturing a shaft assembly in cars, and the claim language is with physical structures, such as a hollow shaft member and a liner, designed to reduce vibrations.<sup>93</sup> The court nevertheless concluded that the claim was directed to a natural law, Hooke's law. Instead of focusing on the claim language at step one, instead the court looked to an undefined, unbounded "focus of the claimed advance."<sup>94</sup> Even though the court gestured to the claim, in practice the court generalized what the invention was actually doing, untethered to the language of the claim. The court gave no thought to the Supreme Court's warning about treading lightly. The court instead stretched itself to reach a questionable holding that this concrete claim effectively was just a natural law. At least the court did find that a different claim potentially was not directed to a natural law and remanded the case to the district court to make that assessment.<sup>95</sup>

Perhaps even more jarring is the court's decision in *Yu v. Apple, Inc.*, where the claim was for an apparatus – a digital camera.<sup>96</sup> Even more than *American Axle*, the claim contains numerous tangible items: imaging sensors, lenses, circuitry, and processors, for example.<sup>97</sup> It is hard to imagine how a digital camera would be abstract. Although the court purported to begin with the claim language, the court instead abstracts away the components to conclude that the claim really was about using multiple pictures to enhance each other, something well-known.<sup>98</sup> Aside from conflating step one of the *Alice-Mayo* framework with step 2, the court discarded the limitations of the claim to conclude that the claim was directed to an abstract idea.

Step two does not fair much better with respect to the claim. As we have argued elsewhere, step 2 is an unbounded quasi-relative inquiry into novelty,

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<sup>91</sup> *Bancorp Servs., LLC v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1273 (Fed. Cir. 2012) ("Although *Ultramercial* has ... been vacated by the Supreme Court, we perceive no flaw in the notion that claim construction is not an inviolable prerequisite to a validity determination under § 101."). For a discussion of the costs and benefits of requiring claim construction prior to assessing § 101, see Timothy R. Holbrook & Mark D. Janis, *Patent-Eligible Processes: An Audience Perspective*, 17 VAND. J. ENT. & TECH. L. 349, 364–65 (2015).

<sup>92</sup> *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285 (Fed. Cir. 2020).

<sup>93</sup> *Id.* at 1290.

<sup>94</sup> *Id.* at 1290 (quoting *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019). Other decisions by the court have used other phrases to describe their dissection of the claim. See Holbrook & Janis, *supra* note 4, at 659 (noting language such as "basic character" and "thrust" of the claims).

<sup>95</sup> *Id.* at 1300-01.

<sup>96</sup> *Yu v. Apple Inc.*, 1 F.4th 1040 (Fed. Cir. 2021).

<sup>97</sup> *Id.* at 1042.

<sup>98</sup> *Id.* at 1043.

obviousness, and, at times enablement.<sup>99</sup> But this analysis does not follow the traditional novelty or nonobviousness analysis, even if that were appropriate under § 101. There is no assessment of all of the limitations of the claim, and the prior art does not constrain the court’s assessment of what is deemed conventional. In *American Axel*, the court dismissively concluded that noting in the relevant claim qualified as an inventive concept with little attention to the claim language itself, including whether the assembly of the components in the process itself could be inventive.<sup>100</sup> In *Yu*, the court faulted the “high level of generality” of the *claim* (not their analysis) for the failure at step two, as well as the claims use of conventional components (again without a consideration of how that determination was made).<sup>101</sup>

At both step one and step two, the claim limitations take a backseat to an analysis unbounded by the actual language of the claims. It is not clear what does limit the analysis especially at step one. The Federal Circuit has cautioned against describing the claims at “such a high level of abstraction and untethered from the language of the claims’ that the claims would be virtually guaranteed to be abstract.”<sup>102</sup> But there is little in the case law to constrain the courts from doing just that.

The Supreme Court has justified this approach to subject matter eligibility again as avoiding creative claim drafting from evading § 101 limits. If a claim can be drafted that satisfies § 101, then it should pass that filter. To suggest that somehow it still is not worthy of a patent means that the Court believes that, regardless of the claim language, the invention simply does not merit patent protection. That presupposes the answer to the issue and also ignores the various other filters that an invention must pass to be patentable.

### *C. Coextensiveness Requirement for the Presumption of Nexus for Secondary Considerations*

While the Federal Circuit has embraced an all-elements rule approach to obviousness, it has rejected a focus on the claim in another context: the presumption of nexus for secondary considerations. Courts are required to consider objective evidence of non-obviousness, even at times in the face of a *prima facie* case of non-obviousness.<sup>103</sup> These forms of evidence are more

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<sup>99</sup> Holbrook & Janis, *supra* note 4, at 660; *Am. Axle*, 967 F.3d at 1305 (Moore, J., dissenting) (noting “the majority has imbued § 101 with a new superpower—enablement on steroids.”).

<sup>100</sup> *Am. Axle*, 967 F.3d at 1299-1300.

<sup>101</sup> *Yu*, 1 F.4th at 1045.

<sup>102</sup> *Trinity Info Media, LLC v. Covalent, Inc.*, 72 F.4th 1355, 1361 (Fed. Cir. 2023).

<sup>103</sup> *Id.* at 1304.



historical in nature and are less technical.<sup>104</sup> The secondary considerations include the commercial success of the invention, law felt and unsolved needs, and the failure of others.<sup>105</sup> The Federal Circuit, at least in its early years, made clear that “all relevant evidence going to the issue of obviousness/nonobviousness, which includes properly presented evidence on secondary considerations, must have been considered prior to reaching a conclusion on obviousness/nonobviousness.”<sup>106</sup> Such “evidence of secondary considerations may often be the most probative and cogent evidence in the record.”<sup>107</sup>

This evidence, of course, does involve inferences and not direct evidence of the invention’s nonobviousness in a technical sense. The inference must be appropriate, so the courts have long required that the evidence have some sort of nexus to the claimed invention.<sup>108</sup> This requirement is most salient in the context of evidence of commercial success. The invention could be successful because of the level of innovation is significant, driving consumer demand. But it could also be because of a clever marketing campaign or from features other than the patented invention.<sup>109</sup> To be probative of non-obviousness, the commercial success (or any secondary factor) must be because of the invention and not some alternative basis.

In implementing this nexus requirement, the Federal Circuit eventually articulated a burden shifting framework as first stated in *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*<sup>110</sup> First, a patentee “bears the burden of coming forward with evidence sufficient to constitute a prima facie case of the requisite nexus.”<sup>111</sup> The court noted that the “prima facie case of nexus is generally made out when the patentee shows both that there is commercial success, and that the

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<sup>104</sup> *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 35–36 (1966) (“These legal inferences or subtests do focus attention on economic and motivational rather than technical issues and are, therefore, more susceptible of judicial treatment than are the highly technical facts often present in patent litigation.”).

<sup>105</sup> *Id.* at 17–18. For a catalog of the various forms of objective evidence, see Kimberly A. Moore, Timothy R. Holbrook, John F. Murphy, *PATENT LITIGATION AND STRATEGY* 710 (5<sup>th</sup> ed. West Academic Publishing 2018).

<sup>106</sup> *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 306 (Fed. Cir. 1985).

<sup>107</sup> *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983). We posit that the modern Federal Circuit does not share this sentiment, which may be driving some of the issues surrounding the nexus requirement.

<sup>108</sup> *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1539 (Fed. Cir. 1983) (“A nexus is required between the merits of the claimed invention and the evidence offered, if that evidence is to be given substantial weight enroute to conclusion on the obviousness issue.”); *see also Solder Removal Co. v. U.S. Int’l Trade Comm’n*, 582 F.2d 628, 637 (C.C.P.A. 1978) (“A nexus must be established between the merits of the claimed invention and evidence of commercial success before that evidence may become relevant to the issue of obviousness.”).

<sup>109</sup> Moore, Holbrook, and Murphy, *supra* note 105, at 710.

<sup>110</sup> 851 F.2d 1387 (Fed. Cir. 1988).

<sup>111</sup> *Id.* at 1392.

thing (product or method) that is commercially successful is the invention disclosed and claimed in the patent.”<sup>112</sup>

The nexus can break down, however, if the commercially successful good “is not coextensive with the patented invention—for example, if the patented invention is only a component of a commercially successful machine or process.”<sup>113</sup> In those situations, a patentee must demonstrate that the success nevertheless is tied to “that which is patented and that which is sold.”<sup>114</sup> Then the patentee has established a *prima facie* case, then the burden of coming forward shifts to the accused who can defeat the nexus by showing the product’s success “was due to extraneous factors other than the patented invention, such as advertising, superior workmanship, etc.”<sup>115</sup> If the accused infringer satisfies its burden, then the factfinder must simply evaluate the evidence on both sides to determine whether the proof of nexus has been sufficient.

Over time, this presumption-shifting framework has been more fully articulated as affording the patent holder a presumption of nexus.<sup>116</sup> Many of the cases noted, however, that the presumption arises when the successful product “is the invention disclosed and claimed in the patent.”<sup>117</sup> The seemingly limited exception to this presumption was when the patented invention was merely a component of a larger product.<sup>118</sup> The rule, therefore, was that, if the patent claim covers the commercially successful product, then the patentee is entitled to the presumption. The exception was not triggered if the device fell within the claim but instead when the entire device was merely a part of a broader product. The coextensiveness requirement, therefore, was consistent with the primacy of the

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<sup>112</sup> *Id.*

<sup>113</sup> *Id.*

<sup>114</sup> *Id.*

<sup>115</sup> *Id.* at 1393.

<sup>116</sup> *J.T. Eaton & Co. v. Atl. Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997) (“If Eaton can demonstrate that the commercial success of its product derives from the claimed invention and is attributable to something disclosed in the patent that was not readily available in the prior art, it is entitled, on the record in this case, to the presumption that the commercial success of its product is attributable to its patented invention.”). *See also* *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000) (“[I]f the marketed product embodies the claimed features, and is coextensive with them, then a nexus is presumed and the burden shifts to the party asserting obviousness to present evidence to rebut the presumed nexus.”); *In re Mettke*, 570 F.3d 1356, 1361 (Fed. Cir. 2009) (“when the commercially successful device is the claimed invention itself, there is a presumption of nexus.”).

<sup>117</sup> *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1329 (Fed. Cir. 2016) (“[T]here is a presumption of nexus for objective considerations when the patentee shows that the asserted objective evidence is tied to a specific product and that product “is the invention disclosed and claimed in the patent.”).

<sup>118</sup> *Id.* at 1329 n.3 (“A limited exception to the presumption of nexus exists where the patented invention is only a component of the product to which the asserted objective considerations are tied.”).

claims in the analysis: if the claim covered the relevant successful product, then the presumption of nexus was established.

The coextensiveness rule, however, began to evolve to consider not merely elements exogenous to the claim's coverage but also potential features of a product covered by the claim but not explicitly claimed as a limitation. Interestingly, this shift away from the narrow exception to the presumption arose in considering what can *rebut* the presumption and not whether the patentee is entitled to the presumption in the first place. In *Ormco Corp. v. Align Tech., Inc.*, the Federal Circuit reasoned that "if the commercial success is due to an unclaimed feature of the device, the commercial success is irrelevant."<sup>119</sup> Similarly, the court noted that if the element that provides commercial success is already in the prior art, then the commercial success of the product "is not pertinent."<sup>120</sup> Stating that the commercial success is irrelevant, however, entails weighing the evidence of nexus and not the presumption.

In this way, the Federal Circuit began to shift the exception to the presumption away from its original origin, where the invention was a component of device that was sold, towards consideration of things covered by the claims but not specifically delineated as a claim limitation. In so doing, the court in *Ormco* relied on a number of cases.<sup>121</sup> Those cases, however, made no such holding. In *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, the court did not discuss unclaimed elements or elements in the prior art at all; instead, the presumption was rebutted because another product "containing all of the claimed features but not targeting female smokers, was a commercial failure."<sup>122</sup> Marketing was the key to commercial success, thus rebutting the presumption. Moreover, *Brown & Williamson* is further inapposite to this proposition because it addressed whether the presumption was rebutted and not whether the presumption should arise at all.

The *Ormco* court's reliance on *Ecolochem, Inc. v. S. California Edison Co.* is equally misplaced.<sup>123</sup> 227 F.3d 1361, 1377–78 (Fed. Cir. 2000). Similar to *Brown & Williamson*, the case dealt with the rebuttal of the presumption, not the presumption itself.<sup>124</sup> The court breezed right by the establishment of the presumption, noting that "Ecolochem offered evidence that its invention was practiced at 28 plants and generated almost \$13 million in revenue from 1983 to

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<sup>119</sup> 463 F.3d 1299, 1312 (Fed. Cir. 2006).

<sup>120</sup> *Id.*

<sup>121</sup> *Id.* at 1312 n.13 & n.14 (citing *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000); *Ecolochem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1377 (Fed.Cir.2000); *J.T. Eaton & Co. v. Atl. Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997); and *Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1580 (Fed.Cir.1983)).

<sup>122</sup> 229 F.3d 1120, 1130 (Fed. Cir. 2000)

<sup>123</sup> 227 F.3d 1361 (Fed. Cir. 2000)

<sup>124</sup> *Id.* at 1377-78.

1990. Once Ecolochem made the requisite showing of nexus between commercial success and the patented invention, the burden shifted to Edison to prove that the commercial success was instead due to other factors extraneous to the patented invention.”<sup>125</sup> Edison argued that an unclaimed aspect of the successful product – mobility – drove its commercial success in order to *rebut* the presumption.<sup>126</sup> The Federal Circuit, however, ultimately held that the presumption had not been rebutted because the commercial success was based on two factors, one claimed and one unclaimed.<sup>127</sup> But the “unclaimed” mobility feature, however, was not covered by the claims at all: “The success was due to both the mobility, undisputedly not covered by the claims, and to the improved filtration process, undisputedly covered by the claims.”<sup>128</sup> Edison failed to rebut the presumption because it failed to disprove that the improved filtration process contributed to the invention’s commercial success.<sup>129</sup> *Ecolochem*, thus, had nothing to do with whether a court should presume nexus and, indeed, found the presumption had not been rebutted.

The presumption in its current form, therefore, permits the presumption to be rebutted even if the commercial version of the invention is covered by the patent but includes some other element. Minimally, it seems that such a finding should rebut the presumption but not eliminate it entirely.

#### D. Enablement (debating whether to include)

- a. “It is true, as Genentech argues, that a specification need not disclose what is well known in the art. *See, e.g., Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1385, 231 USPQ 81, 94 (Fed.Cir.1986). However, that general, oft-repeated statement is merely a rule of supplementation, not a substitute for a basic enabling disclosure. It means that the omission of minor details does not cause a specification to fail to meet the enablement requirement. However, when there is no disclosure of any specific starting material or of any of the conditions under which a process can be carried out, undue experimentation is required; there is a failure to meet the enablement requirement that cannot be rectified by asserting that all the disclosure related to the process is within

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<sup>125</sup> *Id.* at 1377.

<sup>126</sup> *Id.* (“Edison countered that the commercial success of Ecolochem’s process was due solely to the fact that it was part of a mobile apparatus, and that since none of the claims at issue include such a mobility limitation, the commercial success factor favors a finding of obviousness in the instant case.”).

<sup>127</sup> *Id.* at 1378 (“These statements make it clear that the commercial success of Ecolochem’s product was, in fact, based on two factors: the improved filtration process, and the mobility of the commercial embodiment.”).

<sup>128</sup> *Id.*

<sup>129</sup> *Id.*

the skill of the art. It is the specification, not the knowledge of one skilled in the art, that **must supply the novel aspects of an invention** in order to constitute adequate enablement.

*Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1366 (Fed. Cir. 1997)

- b. Automotive Techs. And other progeny (criticized in *Patents, Presumptions, and Public Notice*)

E. *Written Description* (debating whether to include)

- a. Gentry Gallery (outlier or not?)
- b. Other cases in the Gentry Gallery family?

F. *Inventorship* – Amy Motmura’s UC Davis piece shows the disconnect between inventorship and claim limitations.

IV. IS THERE A COHERENT JUSTIFICATION FOR DIVERGING FROM THE CLAIMS

A. Courts Have Not Holistically Assessed This Dynamic, Resulting in Episodic Divergence

1. Do Problems with Peripheral Claiming Cause the Problems?

[We don’t think so. In most of these situations, the claim has little to do with the peripheral nature of the claims. Instead, it is a disregard for the limitations that are there. We don’t want to revisit claim construction literature but plan to engage with the following, at least):

- a. Lemley & Burk – Sign Posts, Penn Law Rev.
- b. Oskar Liivak – mostly focuses on the claims in claim construction (but need to check)
  - i. Oskar Liivak, *Rescuing the Invention from the Cult of the Claim*, 42 Seton Hall L. Rev. 1 (2012)
  - ii. Oskar Liivak, *Finding Invention*, 40 Fla. St. U. L. Rev. 57 (2012)
- c. Cotropia
  - i. Christopher A. Cotropia, *What Is the "Invention"?*, 53 Wm. & Mary L. Rev. 1855 (2012)
  - ii. Christopher A. Cotropia, *Physicalism and Patent Theory*, 69 Vand. L. Rev. 1543 (2016)
- d. Fromer – Claiming Intellectual Property

2. Difference between “claiming” and “covering/infringing”
  - Recent delisting/ANDA case describes this dynamic
  - Perhaps explains the difference in the presumption of nexus context, although it isn’t clear that the presumption is framed correctly
  - In particular, if an element that is covered by the patent but not claimed drives commercial success, then it is still the patented invention that is commercially successful
  - Perhaps one could say that the extra element should rebut the presumption, but it makes no sense to say that the presumption fails to arise at all, especially in light of the faulty origins of that approach to the presumption.
3. Point of Novelty
  - Mark Lemley’s essay is the closest to finding a comprehensive approach to many of these doctrines.
  - We don’t think it answers all of these issues, and we also disagree with it
  - The idea of point of novelty lacks a textual basis in the statute, and allows for courts to fish around for what they believe to be “important” instead of focusing on the claimed invention
  - This is most readily seen in the subject matter eligibility context
  - It also does not seem to explain exhaustion (although Mark argues that it does). It isn’t clear from *Univis* or from *Quanta* that those precursor items contained the “point of novelty,” in part because there is little to no discussion of the claims at issue
  - Moreover, the fact that the Federal Circuit does not apply exhaustion on a claim-by-claim basis belies a focus on any point of novelty

## V. RETAINING THE PRIMACY OF THE CLAIMS

We think the revolution started by the Federal Circuit was the right move. Yes, we are actually defending the early Federal Circuit. We also think that concerns about creative claim drafting are overblown. To the contrary, we think that a system that allows patent attorneys to draft claims to navigate various rules is laudable. We have already seen the Federal Circuit reject the idea that drafting claims to cover commercial embodiments on the market is not inequitable conduct.

Additionally, in other areas, we view transacting around various rules as laudable, such as in property rule. The rules create defaults around which the parties can negotiate to obtain a better outcome. Similar things can be seen in contract law. Contracts may be construed against a drafter, such as in insurance law, but the courts don't belittle the ability of parties to contract around certain rules. We plan on looking at some of Ian Ayres work in this area and others dealing with contracts, such as the incomplete contract situation, etc. In addition to the above sources, we are looking at:

1. Ian Ayres:
  - ["Regulating Opt-Out: An Economic Theory of Altering Rules"](#)  
(Yale Law Journal)
  - His work specifically examines how parties can contract around default rules effectively and a bit of policy
2. Robert Scott's work on contract theory and default rules:
  - ["The Case for Formalism in Relational Contract"](#)
3. John Duffy · ["The Festo Decision and the Return of the Supreme Court to the Bar of Patents"](#):

This project is also adjacent to another one that we have broke ground on: the stagnant nature of patent law at the Federal Circuit. While little has happened in terms of doctrine, we think many disagreements have gone below the surface, especially in the area of obviousness. Judges are using the same rules but applying them differently to advance their normative views in ways that are not apparent.

We also think the PTAB has impacted (overwhelmed?) the Federal Circuit, turning the Federal Circuit into a court far more of error correction than a chaperone to the patent system. Additionally, we think the PTAB reflects a failed experiment in trial-level specialization in this way: the PTAB rarely cites other PTAB decisions, and there is little to no doctrinal innovation in that setting, one where we have experts not only in law but in technology. Instead, the PTAB renders fact-intensive opinions that do not advance the law in any way. It does not operate in a common law fashion that is advancing patent law. To the contrary, it is so fact specific as to make any innovations impossible.