ees' claims as to compensation and leave, *see Adams v. Hinchman*, 154 F.3d 420, 422 n.2 (D.C. Cir. 1998).

The reasonableness of OPM's position is buttressed by the point made in one of the Comptroller General's opinions from 1984. In that opinion, the Comptroller General pointed out that interpreting the in-lieu-of holiday rule to apply to part-time employees would mean that part-time employees working fewer than five days per week would obtain disproportionately favorable in-lieu-of holiday benefits compared to their full-time colleagues; as the opinion noted, "the smaller the number of regularly scheduled workdays [for such an employee], the greater the proportional entitlement to designated or in lieu of holidays." *Matter of Shirley A. Lombardo*, 63 Comp. Gen. at 307. It is not unreasonable for OPM to conclude that Congress would not have intended to implement a system having such a perverse outcome.

In sum, we hold that it was reasonable for OPM, in its formal regulations, to interpret the reference to "basic workweek" as applying only to full-time employees. That position is consistent with the position taken by the Comptroller General in interpreting the statute, and it is consistent with the position taken by OPM since OPM first issued regulations on the issue. Because the language and context of the statute do not clearly indicate that Congress or the President intended a contrary interpretation of the term "basic workweek," we sustain OPM's interpretation of that term as applicable only to full-time employees.

Each party shall bear its own costs for this appeal.

AFFIRMED

[redacted]

INTERCONTINENTAL GREAT BRANDS LLC, Plaintiff–Appellant

v.

KELLOGG NORTH AMERICA COMPANY, Kellogg USA, INC., Keebler Company, Keebler Foods Company, Kellogg Sales Company, Defendants–Cross–Appellants

2015–2082
2015–2084

United States Court of Appeals, Federal Circuit.

Decided: September 7, 2017

[redacted]

[redacted]

Katie Crosby Lehmann, Ciresi Conlin LLP, Minneapolis, MN, argued for Plaintiff–Appellant. Also represented by Michael V. Ciresi.

Richard Daniel Harris, Greenberg Traurig LLP, Chicago, IL, argued for Defendants–Cross–Appellants. Also represented by Matthew J. Levinstein, James J. Lukas, Jr.

Jacob Daniel Koering, Attorney, Miller, Canfield, Paddock, & Stone, PLC, Chicago, IL, for Plaintiff–Appellant.

Before PROST, Chief Judge, REYNA and TARANTO, Circuit Judges.

Opinion dissenting in part filed by Circuit Judge REYNA.

TARANTO, Circuit Judge.

Kraft Foods Global Brands LLC (now called Intercontinental Great Brands) owns U.S. Patent No. 6,918,532, which issued in 2005 and was supplemented with additional claims on reexamination in 2011. The '532 patent describes and claims a food package that, after opening, can be resealed to maintain the freshness of the food items inside. Kraft brought this patent-infringement suit against Kellogg North America Co., Keebler Foods Co., and affiliates (collectively, Kellogg) in the Northern District of Illinois. The district court held that Kellogg was entitled to summary judgment of invalidity for obviousness of the asserted claims of the '532 patent. *Intercontinental Great Brands LLC v. Kellogg N. Am. Co.*, 118 F.Supp.3d 1022, 1027–42 (N.D. Ill. 2015). The court also held that Kraft was entitled to summary judgment rejecting Kellogg's counterclaim of unenforceability of the patent due to alleged inequitable conduct by Kraft, chiefly in an *ex parte* reexamination proceeding. *Id.* at 1044–45. We affirm.

I

The '532 patent describes a combination of two known kinds of packaging. One, common for cookies, uses a frame surrounded by a wrapper. The other, common for wet wipes, uses a package on which the label may be pulled back to access the contents, then put back in place to reseal the package to preserve the items remaining inside.

Thus, the background section of the patent begins: "Containers for food products such as cookies and other snacks typically include a frame surrounded by an outer wrapper. The frame acts as a tray to hold the food product and to protect the food product from damage." '532 patent, col. 1, lines 12–15. A person wanting to consume some but not all of the items in the package "normally" does so "by opening one end of the wrapper, withdrawing the tray from the inside thereof, and then removing the food product from the tray." *Id.*, col. 1, lines 15–18. "[T]hese containers," however, "generally do not provide a convenient opening and reclosing arrangement. For example, reclosing of the wrapper, once opened, generally includes simply folding or rolling the end down and clip-ping the end to keep the wrapper closed." *Id.*, col. 1, lines 19–23.

At the same time, "[r]eclosable seals have been used for dispensing bags for wet tissue or disposable cleaning wipes." *Id.*, col. 1, lines 24–25. "The label on these bags can be pulled back thereby exposing an opening, allowing access to the wet tissues or wipes inside." *Id.*, col. 1, lines 25–27. "Typically," however, "these dispensing bags" lack a rigid internal structure, *i.e.*, "are completely flexible, formed exclusively of a plastic or other suitable flexible material which closely surrounds the pack of wet tissues or wipes." *Id.*, col. 1, lines 27–30. Lacking an internal rigid structure, "such known dispensing bags are not well suited for containing food products as

these containers fail to provide adequate protection for storing food products." *Id.*, col. 1, lines 34–36.

The patent then introduces the invention:

> The purpose of the present invention is to provide a new and improved container for food products such as rigid food articles, for example cookies and the like, which container provides adequate protection for the contents thereof, while concurrently facilitating opening of the container wrapper and resealing the seal to protect the contents thereof until the contents are fully consumed.

Id., col. 1, lines 39–46.

Claim 1, which is largely representative for purposes of this appeal, recites as follows:

> 1. A polygonal shaped food container comprising:
>
> a frame defining the polygonal shape of the container, said container having a top, a bottom[,] and sides connecting the top and bottom, the frame containing a food product comprised of discrete food articles;
>
> a wrapper surrounding said frame, said wrapper forming the top[,] sides[,] and bottom of the container;
>
> said top having an access opening sufficiently large to provide hand access to substantially all of the discrete food articles contained within the frame, such that substantially any one of the discrete food articles can be accessed and removed individually through said access opening; and
>
> a sealing layer, adhesively sealed to said top around said opening, said sealing layer including a starter portion located near a side of the top which can be grasped by a user, said sealing layer being releasable when said starter portion is pulled in a direction away from said side to in turn pull and thereby release at least a portion of said sealing layer to provide the hand access to said top access opening and reclosable against said top to seal said opening when said sealing layer is moved back against the said top.

Id., col. 5, lines 29–51.

In October 2007, about two years after the '532 patent issued, a Swedish company that produces resealable packages sought an *ex parte* reexamination of that patent from the U.S. Patent and Trademark Office. *Intercontinental*, 118 F.Supp.3d at 1026. The Office initiated the reexamination, and in April 2010, the examiner (in the central reexamination unit) rejected all claims except two of the claims that Kraft added (to which the examiner objected), relying centrally on a short 2001 article in *Packaging News* that displayed and described Re–Seal It packaging made by a Swedish firm and marketed by Paramount Packaging. In August 2011, however, the Patent Trial and Appeal Board reversed all of the rejections. It relied critically on a particular phrase in the *Packaging News* article asserting the conventionality of the wrapping film to distinguish the Kraft patent claims—a phrase that does not appear in the descriptions of Paramount Re–Seal It packaging in the distinct prior-art articles that became central in the present litigation. *Ex Parte Kraft Foods Global Brands LLC.*, No. 2011-005770, 2011 WL 3754634 (P.T.A.B. Aug. 19, 2011). The resulting reexamination certificate contained the original claims 1–25 and new claims 26–67.

In 2013, Kraft sued Kellogg for infringement of a number of claims of the '532 patent. In particular, Kraft alleged that Kellogg infringed by making, using, selling, and offering certain resealable cookie packages that a Kellogg document suggested were designed to " 'circumvent[ ] the Kraft patent while maintaining similar properties.' " *Intercontinental*, 118 F.Supp.3d at 1026 (alteration in original).

Kellogg responded by alleging, among other things, that the asserted claims of the '532 patent were invalid for obviousness and that the patent was unenforceable due to inequitable conduct by Kraft before the Board in securing reversal of the examiner's rejections during reexamination. Kellogg eventually moved for summary judgment of invalidity, and Kraft moved for summary judgment on Kellogg's counterclaim of unenforceability due to inequitable conduct.[1]

The district court granted Kellogg's motion for summary judgment of invalidity of all of the asserted claims (1, 3, 4, 6, 26, 32, 33, 34, 35, 36, 37, 39, and 42) under 35 U.S.C. § 103 (2006).[2] As the patent itself makes clear, the "frame" element is shown by prior art, such as U.S. Patent No. 3,740,238 issued to Graham, which discloses a traditional cookie package with a frame to hold the cookies, described as prior art in the '532 patent. And while the patent makes clear that *non-food* prior art showed a peel-back resealable package *without a rigid structure* (packaging for wet wipes), what the patent does not show, but the record in this litigation reveals, is prior art showing a peel-back resealable package *with a rigid tray for food items* ("such as" discrete items like sushi and canapés)—namely, two related articles in the *Machinery Update* publication describing and showing a Re-Seal It package marketed in Britain by Paramount Packaging as an agent for Real-Seal It Sweden. *See Machinery Update*, March/April 2002 at 59–60 (J.A. 4423–24); *Machinery Update*, September/October 2001 at 46–47 (J.A. 4708–09).

First, considering independent claims 1 and 34, the district court concluded that the record put beyond reasonable dispute that all claim elements except the "frame" element were shown in the *Machinery Update* articles and the "frame" element was shown in the prior art of cookie packaging, such as the Graham patent. *Intercontinental*, 118 F.Supp.3d at 1030–34. The court then determined that the only reasonable inference on the record was that a relevant skilled artisan would have been motivated to combine those prior-art references. The court specifically stressed that the absence of a "convenient opening and reclosing arrangement" was a "known problem" for cookie packaging and that the *Machinery Update* resealable, tray-included packaging for foods offered a skilled artisan a solution to the problem simply by replacing the *Machinery Update* "tray" with a frame, *i.e.*, a tray with higher sides. More generally, the court considered the simple and clear teachings of the art, the importance of common sense and ordinary creativity, and the conclusory character of Kraft's expert's assertions of nonobviousness. *Id.* at 1034–38. The court next analyzed the various dependent claims, finding no basis for a different conclusion about the art-based portion of the obviousness analysis. *Id.* at 1038–41.

Finally, the court concluded that Kraft's evidence of certain objective indicia, though substantial, was simply not entitled to such weight in the ultimate legal assess-

1. Kellogg also sought summary judgment of non-infringement, but the district court agreed only as to literal infringement, concluding that the record presented a triable issue as to infringement by equivalence. *Intercontinental*, 118 F.Supp.3d at 1042–44. We need not discuss either half of that ruling, or any issue except the invalidity and unenforceability issues, as to which we affirm the district court's summary judgment rulings.

2. The '532 patent, which issued from a 2003 application, is governed by the version of § 103 that was in effect before its amendment by the Leahy–Smith America Invents Act, Pub. L. No. 112–29, § 3(n)(1), 125 Stat. 284, 293 (2011). *See Intercontinental*, 118 F.Supp.3d at 1027 n.2.

ment of obviousness as to produce a bottom-line conclusion of anything but invalidity. *Id.* at 1041–42. In particular, the court determined that Kraft had strong evidence of commercial success tied to the patent-claimed packaging, industry praise, and copying by Kellogg. *Id.* at 1041. Nevertheless, the court concluded, "this is a case in which the secondary considerations do not overcome Kellogg's extremely strong prima facie showing that the invention was obvious in light of Machinery Update." *Id.* The court explained:

> In this case, the prior art references teach all of the claim limitations—all of the elements could be found in existing food packaging technology. In fact, nearly all of the elements were found in one *Machinery Update* article, and the rest already existed in cookie packages. Additionally, the technology is relatively simple. Based on these considerations, a person skilled in the art would have a reason to combine the elements to create the invention. In sum, the primary considerations lead to a conclusion that the invention was obvious in light of the prior art, and [Intercontinental's] strong showing of secondary considerations does not outweigh this determination.
>
> In sum, based on the undisputed facts, all of the asserted claims are invalid as obvious in light of *Machinery Update* when combined with existing cookie packages.

Id. at 1042.

With regard to Kellogg's unenforceability challenge to the '532 patent, based chiefly on alleged inequitable conduct by Kraft in the reexamination proceeding, the court granted Kraft's motion for summary judgment rejecting the challenge. *Id.* at 1044–45. The court explained that the charge of inequitable conduct during reexamination did not and could not rest on withholding by Kraft of material prior art; in particular, "[i]t is undisputed that [the 2002] *Machinery Update* [article] ... [was] presented during reexamination." *Id.* at 1044. The court then addressed Kellogg's key charge—that Kraft's counsel did not tell the Patent and Trademark Office (PTO) that the phrase in the *Packaging News* article about the conventionality of the wrapping film, on which the Board came to rely in upholding Kraft's claims, was actually a misprint, as allegedly made evident by the opposite characterization of the film used in Re-Seal It packaging in the 2002 *Machinery Update* article. The district court, while agreeing that the phrase in *Packaging News* likely was a misprint, concluded that Kraft's counsel "merely restated the contents of the misprinted article" and "[t]here is no evidence that the attorney knowingly failed to identify the inconsistency between the two articles." *Intercontinental*, 118 F.Supp.3d at 1045. Kellogg thus had not presented evidence that could meet the standard for intent to deceive established in *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1290–91 (Fed. Cir. 2011) (en banc). *Intercontinental*, 118 F.Supp.3d at 1045.[3]

3. Kellogg also alleged that Kraft withheld prior art (the "Fuji Package") in the original prosecution, but the district court concluded, for several reasons, that the evidence offered to support that assertion failed to meet *Therasense*'s inequitable-conduct standard. *Intercontinental*, 118 F.Supp.3d at 1045. In this court, Kellogg makes only what amounts to a bare assertion of error on this point, not a meaningful argument for why the district court erred. Kellogg's Opening Corrected Br. 56–57. For record evidence on the point, Kellogg cites only "Sec. V(C), *supra*," which does not exist, and J.A. 4924–26, which does not address inequitable non-disclosure during prosecution. Kellogg has forfeited the point and certainly has not shown error. We do not further address this aspect of the inequitable-conduct issue.

Kraft appeals regarding invalidity. Kellogg cross-appeals regarding unenforceability. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

II

[redacted] We review the district court's grant of summary judgment *de novo*. *See Blow v. Bijora, Inc.*, 855 F.3d 793, 797 (7th Cir. 2017); *Innovention Toys, LLC v. MGA Entm't, Inc.*, 637 F.3d 1314, 1318 (Fed. Cir. 2011). "The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). A "material fact" is one that "might affect the outcome" of the case. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986); *Williams v. Brooks*, 809 F.3d 936, 941–42 (7th Cir. 2016); *Crown Operations Int'l, Ltd. v. Solutia Inc.*, 289 F.3d 1367, 1375 (Fed. Cir. 2002). A "genuine" dispute over a material fact exists only if it is "reasonable" on the summary-judgment record to find that fact, and therefore to reach a verdict, against the movant, taking into account the governing burden of persuasion. *Anderson*, 477 U.S. at 248, 106 S.Ct. 2505 ("[A] material fact is 'genuine' . . . if the evidence is such that a reasonable jury could return a verdict for the nonmoving party."); *id.* at 250–57, 106 S.Ct. 2505 (reiterating reasonableness inquiry and role of who has burden of persuasion and whether "clear and convincing evidence" or other standard applies); *see Scott v. Harris*, 550 U.S. 372, 378, 127 S.Ct. 1769, 167 L.Ed.2d 686 (2007) (On summary judgment, "courts are required to view the facts and draw *reasonable* inferences in the light most favorable to the party opposing" the motion. (emphasis added) (internal quotation marks omitted)); *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150, 120 S.Ct. 2097, 147 L.Ed.2d 105 (2000) ("[T]he court must draw all reasonable inferences in favor of the nonmoving party."); *U.S. Water Servs., Inc. v. Novozymes A/S*, 843 F.3d 1345, 1350 (Fed. Cir. 2016); *Laskin v. Siegel*, 728 F.3d 731, 734 (7th Cir. 2013).

A

[redacted] A claimed invention is unpatentable "if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious" to one of ordinary skill in the relevant art. 35 U.S.C. § 103. Obviousness is a legal question based on underlying factual determinations. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406, 127 S.Ct. 1727, 167 L.Ed.2d 705 (2007); *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966); *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013). Among the factual determinations are "the scope and content of the prior art, differences between the prior art and the claims at issue, the level of ordinary skill in the pertinent art, and any objective indicia of non-obviousness." *Randall*, 733 F.3d at 1362 (citing *KSR*, 550 U.S. at 406, 127 S.Ct. 1727; *Graham*, 383 U.S. at 17–18, 86 S.Ct. 684). Also a fact question, of significance here, is whether the relevant skilled artisan had a motivation to combine pieces of prior art in the way eventually claimed in the patent at issue. *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1047–48, 1051 (Fed. Cir. 2016) (en banc); *PAR Pharm., Inc. v. TWI Pharm., Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014); *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1237–39 (Fed. Cir. 2010); *see also, e.g., Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014, 1021 (Fed. Cir. 2017) (applying the same standards to the Patent Trial and Appeal Board's determination of obviousness in an *inter partes* review).[4] Once the relevant

4. Whether a skilled artisan would have reasonably expected success, an issue in many

fact issues are resolved, "[t]he ultimate judgment of obviousness is a legal determination" for the court. *KSR*, 550 U.S. at 427, 127 S.Ct. 1727.

"In *KSR*, the Supreme Court criticized a rigid approach to determining obviousness based on the disclosures of individual prior-art references, with little recourse to the knowledge, creativity, and common sense that an ordinarily skilled artisan would have brought to bear when considering combinations or modifications." *Randall*, 733 F.3d at 1362. "[T]he Court required an analysis that reads the prior art in context, taking account of 'demands known to the design community,' 'the background knowledge possessed by a person having ordinary skill in the art,' and 'the inferences and creative steps that a person of ordinary skill in the art would employ.' " *Id.* (quoting *KSR*, 550 U.S. at 418, 127 S.Ct. 1727). A "court must ask whether the [claimed] improvement is more than the predictable use"—a "predictable variation"—"of prior art elements according to their established functions," considering whether more is involved than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement." *KSR*, 550 U.S. at 417, 127 S.Ct. 1727. "[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." *Id.* at 417, 127 S.Ct. 1727. The court should consider a range of real-world facts to determine "whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *Id.* at 418, 127 S.Ct. 1727; *see id.* ("[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does."). "One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims." *Id.* at 419–20, 127 S.Ct. 1727.

[redacted] Depending on the record, summary judgment of invalidity for obviousness may be appropriate. The Supreme Court ordered summary judgment in *KSR* after a careful determination of the facts put beyond genuine dispute by the record, and it explained that "a conclusory affidavit addressing the question of obviousness" does not "exclude the possibility of summary judgment." *Id.* at 426, 127 S.Ct. 1727. Rather:

> In considering summary judgment on that question the district court can and should take into account expert testimony, which may resolve or keep open certain questions of fact. That is not the end of the issue, however. The ultimate judgment of obviousness is a legal determination. *Graham*, 383 U.S. at 17 [86 S.Ct. 684]. Where, as here, the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in material dispute, and the obviousness of the claim is apparent in light of these factors, summary judgment is appropriate.

Id. at 427, 127 S.Ct. 1727. Based on the required close examinations of case-specific records, this court, since *KSR*, has sometimes held summary judgment of obviousness unwarranted[5] and sometimes

obviousness cases, has not been presented as an issue here.

5. *See, e.g., Ivera Med. Corp. v. Hospira, Inc.*, 801 F.3d 1336 (Fed. Cir. 2015); *Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343 (Fed. Cir. 2013); *OSRAM Sylvania, Inc. v. Am. Induction Techs., Inc.*, 701 F.3d 698 (Fed. Cir. 2012); *Innovention Toys, LLC v. MGA Entm't, Inc.*, 637 F.3d 1314 (Fed. Cir. 2011); *Trans-*

held it warranted.[6]

In this case, we conclude, the district court correctly determined that summary judgment was warranted on the record, for the reasons we have summarized in describing the district court's opinion. Kraft's arguments to the contrary are unpersuasive.

1

Kraft turns first to the objective indicia (secondary considerations) bearing on obviousness. Kraft's Opening Br. 38–42. It contends that the district court treated the objective indicia as an "afterthought," "writing off the patent before turning to objective indicia," and "repeatedly not[ing] its finding of obviousness before considering the objective indicia." *Id.* at 38, 40, 41. That contention mischaracterizes the district court's reasoning, which followed a sequence that accords with *KSR*, *Graham*, and this court's precedents.

The district court drew its conclusion of obviousness only after, not before, considering the objective indicia. *Intercontinental*, 118 F.Supp.3d at 1042. Before reviewing the objective indicia, the court concluded only that Kellogg had made a "strong prima facie showing of obviousness." *Intercontinental*, 118 F.Supp.3d at 1037–38 ("Because there is no genuine dispute that all elements of claims 1 and 34 are disclosed in the prior art and it would have been predictable for a person of skill in the art to combine those elements, Kellogg has made a strong prima facie showing of obviousness as to independent claims 1 and 34."); *see id.* at 1038–41 (same for asserted dependent claims). As its opinion shows, *id.* at 1034–37, the court drew *that* conclusion based on the *Graham* factors directed to identifying the teachings of the prior art, as well as the considerations this court has identified as bearing on the question of motivation to combine. *See, e.g.*, *Plantronics*, 724 F.3d at 1354 ("[M]otivation to combine may be found explicitly or implicitly in market forces; design incentives; the 'interrelated teachings of multiple patents'; 'any need or problem known in the field of endeavor at the time of invention and addressed by the patent'; and the background knowledge, creativity, and common sense of the person of ordinary skill.") (citing *Perfect Web*, 587 F.3d at 1328–29 (quoting *KSR*, 550 U.S. at 418–21, 127 S.Ct. 1727)).

The court thus did not draw an ultimate conclusion regarding obviousness before considering the objective indicia. The contrary is not shown by the court's not-uncommon choice of words when conducting the ultimate weighing, namely, that the objective indicia "do not overcome Kellogg's extremely strong prima facie show-

ocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296 (Fed. Cir. 2010); *TriMed, Inc. v. Stryker Corp.*, 608 F.3d 1333 (Fed. Cir. 2010); *Source Search Techs., LLC v. LendingTree, LLC*, 588 F.3d 1063 (Fed. Cir. 2009); *Süd-Chemie, Inc. v. Multisorb Techs., Inc.*, 554 F.3d 1001 (Fed. Cir. 2009).

6. *See, e.g.*, *Hoffman–La Roche Inc. v. Apotex Inc.*, 748 F.3d 1326 (Fed. Cir. 2014); *Ohio Willow Wood Co. v. Alps S., LLC*, 735 F.3d 1333 (Fed. Cir. 2013); *Bayer Healthcare Pharm., Inc. v. Watson Pharm., Inc.*, 713 F.3d 1369 (Fed. Cir. 2013); *Wm. Wrigley Jr. Co. v. Cadbury Adams USA LLC*, 683 F.3d 1356 (Fed. Cir. 2012); *MySpace, Inc. v. GraphOn Corp.*, 672 F.3d 1250 (Fed. Cir. 2012); *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303 (Fed. Cir. 2011); *Tokai Corp v. Easton Enters., Inc.*, 632 F.3d 1358 (Fed. Cir. 2011); *King Pharm., Inc. v. Eon Labs, Inc.*, 616 F.3d 1267 (Fed. Cir. 2010); *Dow Jones & Co., Inc. v. Ablaise Ltd.*, 606 F.3d 1338 (Fed. Cir. 2010); *Media Techs. Licensing, LLC v. Upper Deck Co.*, 596 F.3d 1334 (Fed. Cir. 2010); *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324 (Fed. Cir. 2009); *Ball Aerosol & Specialty Container, Inc. v. Ltd. Brands, Inc.*, 555 F.3d 984 (Fed. Cir. 2009); *Ricoh Co. v. Quanta Comput. Inc.*, 550 F.3d 1325 (Fed. Cir. 2008).

ing." *Intercontinental*, 118 F.Supp.3d at 1041. *See, e.g.*, *Ohio Willow*, 735 F.3d at 1344 (similar usage); *Perfect Web*, 587 F.3d at 1333 (similar); *cf. KSR*, 550 U.S. at 426, 127 S.Ct. 1727 (secondary considerations do not "dislodge" the determination that the claim would have been obvious).

While withholding a conclusion as to obviousness until considering the objective indicia, the district court did draw the following conclusions before such consideration: "there was a known problem in the cookie packaging industry, and all of the elements of the invention existed in the prior art"; "[a] packaging expert, with knowledge of existing food packaging technology, would have thought to combine a resealable container and a frame big enough to contain cookies"; and the claimed "combination 'would have been entirely predictable and grounded in common sense.' " *Intercontinental*, 118 F.Supp.3d at 1035 (quoting *Ball Aerosol & Specialty Container*, 555 F.3d at 992–93). The court then concluded (before discussing objective indicia): "No reasonable jury could conclude that a person skilled in packaging design would not be motivated to combine these features." *Id.*

Kraft contends that objective indicia must be evaluated before drawing a conclusion about whether a reasonable jury could find that a relevant skilled artisan had a motivation to combine the prior art, not merely before drawing the ultimate obviousness conclusion. But it cites no precedent so holding.

Kraft does cite authorities confirming that, in some cases, objective indicia can be important evidence of obviousness, sometimes even the most important evidence. *See, e.g.*, *Plantronics*, 724 F.3d at 1355; *Crocs, Inc. v. Int'l Trade Comm'n*, 598 F.3d 1294, 1310 (Fed. Cir. 2010). And it cites authorities that say, consistent with *KSR* and *Graham*, that objective indicia must be considered and given "fair weight" before a legal conclusion on obviousness is drawn. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1391 (Fed. Cir. 1988); *see Leo Pharm. Prods., Ltd. v. Rea*, 726 F.3d 1346, 1357–58 (Fed. Cir. 2013); *Plantronics*, 724 F.3d at 1355; *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 711 F.3d 1348, 1368 (Fed. Cir. 2013); *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1076 (Fed. Cir. 2012); *see also Apple*, 839 F.3d at 1058; *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1368–71 (Fed. Cir. 2012); *Ecolochem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1380–81 (Fed. Cir. 2000). But the district court here did just that. And Kraft cites no authority that requires consideration of objective indicia as part of the motivation-to-combine factual analysis.

[redacted] The staged consideration undertaken by the district court, and reflected in our cases, makes sense within the motivation-to-combine framework, a framework with which Kraft does not take issue. When a challenger shows that a "motivation" existed for a relevant skilled artisan to combine prior art in the way claimed in the patent at issue, such a showing commonly supports and leads readily to the further, ultimate determination that such an artisan, using ordinary creativity, would actually have found the claimed invention obvious. But the latter conclusion does not follow automatically from the former finding, and additional evidence may prevent drawing it. Identification of a "motivation" to make the combination may not give a complete picture of what a skilled artisan, exercising ordinary creativity without the incentive of patent protection, would actually have found it obvious to "disclose[ ] or devise[ ]" at the relevant time. *See Graham*, 383 U.S. at 11, 86 S.Ct. 684 (explaining that when Con-

gress adopted § 103, and even before, "[t]he inherent problem was to develop some means of weeding out those inventions which would not be disclosed or devised but for the inducement of a patent"). Even with a motivation proved, the record may reveal reasons that, after all, the court should not conclude that the combination would have been obvious, *i.e.*, already part of the public domain.[7] One type of such additional evidence consists of evidence of objective indicia—commercial success traceable to the claimed invention, industry praise, copying, and certain other facts concerning people's actions and statements.

[redacted] This way of structuring the analysis implements the requirement that the approach to determining obviousness be "expansive" and "flexible." *See KSR*, 550 U.S. at 415, 127 S.Ct. 1727. It reflects an understanding of the role of "motivation" that fits our consistent treatment of that element of the analysis as factual in nature. And it fits the Supreme Court's treatment of objective indicia as evidence to be weighed in the overall *legal* determination of obviousness. We see no error in the sequence of steps the district court took in arriving at its ultimate obviousness determination.

Kraft's only argument about the objective indicia thus fails. Kraft cannot complain that the district court failed to credit its evidence regarding objective indicia: the district court accepted the facts Kraft asserted about commercial success, industry praise, and copying. What remains for the objective indicia, therefore, is a weighing to produce a legal conclusion. But Kraft does not additionally argue to us, certainly not in a meaningful way, that in this particular case the objective indicia accepted by the district court require a legal conclusion of nonobviousness if we agree with the district court as to the prior-art and motivation-to-combine elements of the analysis. Any implicit, undeveloped suggestion to that effect by Kraft is not enough on the record here, given the strength of the record on those elements, including the simplicity of the technology and combination at issue, the recognized problem of resealing for cookie packaging, and the strong teaching of the prior art just before the claimed priority date. *See, e.g., Ohio Willow*, 735 F.3d at 1344 ("[W]here a claimed invention represents no more than the predictable use of prior art elements according to established functions, as here, evidence of secondary indicia are frequently deemed inadequate to establish nonobviousness.").

2

[redacted] Kraft next argues that the district court improperly resolved genuine factual disputes. The district court concluded that the following were the only reasonable findings on the record: the *Machinery Update* articles (published shortly before Kraft's priority date) disclose all the elements of the claims in combination—including, notably, a pull-back resealable package for discrete food items with a rigid tray—except the required "frame" that was common for cookies, as shown by Graham; the absence of a satisfactory resealable package was a known problem for cookies; and the ordinary creativity of the relevant skilled packaging artisan motivated and made predictable the use of the *Machinery Update* package with a cookie-protecting frame as a solution to that known problem. Kraft has not shown any

7. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1259 (Fed. Cir. 2007) (citing *KSR* for "the fundamental proposition that obvious variants of prior art references are themselves part of the public domain"); *see also In re Huai-Hung Kao*, 639 F.3d 1057, 1073 (Fed. Cir. 2011); *In re Wiseman*, 596 F.2d 1019, 1023 (C.C.P.A. 1979).

basis in the record for reasonable contrary findings. Those findings, in this case, suffice to justify the overall legal conclusion of obviousness, there being no meaningful argument that the objective indicia, when weighed in Kraft's favor (as the district court did), can change the ultimate conclusion.

Kraft argues that the district court failed to provide "explicit and clear reasoning providing some rational underpinning" for its invocation of common sense in its motivation-to-combine analysis. Kraft's Opening Br. 43 (quoting *Plantronics*, 724 F.3d at 1354). We disagree. The court relied on the record demonstrating the "known problem" of an insufficiently "convenient opening and reclosing arrangement" for cookie packaging and the suggestion in *Machinery Update* itself that its packaging, with a tray, was usable for a variety of foods, "such as" discrete items like sushi and canapés. *Intercontinental*, 118 F.Supp.3d at 1035–36.

[redacted] Kraft also points to the absence of expert testimony for Kellogg on this point. Kraft's Opening Br. 43. But we have recognized that some cases involve technologies and prior art that are simple enough that no expert testimony is needed. *See Wyers*, 616 F.3d at 1239 ("*KSR* and our later cases establish that the legal determination of obviousness may include recourse to logic, judgment, and common sense, in lieu of expert testimony."); *Perfect Web*, 587 F.3d at 1329; *Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356, 1365 (Fed. Cir. 2008). What is claimed and described in the '532 patent—which does not include any new manufacturing equipment or instructions to produce the described and claimed packaging—makes this such a case.

Kraft next contends that the evidence in the record shows that there was more than one reasonable inference about whether a relevant skilled artisan had a motivation to use the *Machinery Update* packaging with a frame for cookies. Kraft begins by relying on the assertion that "Kellogg personnel *rejected* the idea of combining a traditional cookie package with the resealable technology" of the *Machinery Update* articles. Kraft's Opening Br. 45. But the record does not support the suggested inference. At best, the cited deposition testimony could establish that a group of Kellogg employees viewed a sample of the Re-Seal It packaging technology at an internal meeting along with other packaging samples brought back from a trade show and Kellogg did not immediately adopt the technology for cookies. *See* J.A. 6328–29, 6347, 6366–69. But the only evidence in the record about the reason behind that initial decision is that Kellogg did not possess the required equipment and did not then wish to purchase new equipment. J.A. 6329. One company's temporary decision about an equipment investment is not sufficient to defeat the otherwise-compelled inference that combining the Re-Seal It packaging with familiar cookie-package frames (as in Graham) was a predictable technological solution to the relevant known market problem.

Kraft does not dispute, as its own evidence recited by the district court confirms, that the invention disclosed in its patent helps solve a known problem with cookie packaging (experienced by those consumers who want the option of eating less than a full package of cookies in one sitting). *Intercontinental*, 118 F.Supp.3d at 1035. The packaging in the *Machinery Update* articles, with an internal tray to protect the contents and convenient resealing functionality, and its suggestion of use for a variety of discrete food items, makes readily predictable its use for cookies by raising the sides of the tray to form a "frame." Kraft points to statements by its packaging expert (or Kraft filings based on

such statements) as allegedly supporting a contrary finding. Kraft's Opening Br. 46–52 (citing portions of J.A. 1769–75, 6134–35, 6146–53, 6156, 6159–60, 6163–64 6166–67). But the expert's statements in this case are insufficient to support a reasonable contrary finding.

Kraft's expert, especially in the PTO, devoted relatively little attention to the *Machinery Update* articles. He focused instead on the *Packaging News* article, which (unlike the *Machinery Update* articles) stated that the Re–Seal It packaging described and shown did not use conventional wrapping—the statement that led the Board on reexamination to reverse the examiner's rejection of Kraft's claims. Regardless, to the extent that his statements apply directly or indirectly to the *Machinery Update* packaging, they rest on misreadings of the articles and disregard of the plain significance of other evidence from Kraft itself. *See Novartis Corp. v. Ben Venue Labs., Inc.*, 271 F.3d 1043, 1050–51 (Fed. Cir. 2001) (determining that expert declaration not based on reasonable inferences from the material record facts amounts to a conclusory opinion insufficient to prevent summary judgment); *see also Scott*, 550 U.S. at 380, 127 S.Ct. 1769.

For example, the expert suggested that the *Machinery Update* articles are focused on layered items like sliced meats and suggest use of a tray only to be removed from the side of the package, not for items like cookies to be accessed from the top by peeling back the resealable flap. Kraft's Opening Br. 46–52. But the district court correctly explained why the *Machinery Update* articles do teach top access to trays with unstacked discrete items, giving sushi and canapés as mere examples ("such as"), as well as parallel perimeter portions at the top for the sealing layer to stick to. *Intercontinental*, 118 F.Supp.3d at 1030–34. We fail to see any other reasonable reading of the *Machinery Update* articles on these points.[8]

Likewise, the expert noted "many reclosure variations," as Kraft summarizes the point, such as "tin ties, twist ties, adhesive tape for reclosing one end, a clip to pinch the end of the package, a zipper strip added to the end or side of the package, and a pinch seal strip added to an end or side of the package." Kraft Opening Br. 47. But as far as the record shows, those were among the very alternatives in the prior art that left consumers with the "known problem" with cookie packaging that motivated turning to the resealable *Machinery Update* packaging. Such known-to-be-unsatisfactory alternatives provide no basis for questioning the predictability of picking out the *Machinery Update* packaging as a new solution to the known problem.

Kraft asserts, based on declarations submitted to the PTO (relied on by its expert in this case), that "[a] skilled artisan would not add a reclosure feature to Graham because it is designed for one-time use, by 'opening at one of its ends,'" and "the Graham tray is inexpensive and 'resiliently flexible' to conform to the cookies," whereas the *Packaging News* packaging "is designed for multiple openings and reclosings" and its "tray is expensive, 'significantly more rigid,' and 'not conformable to the food products.'" Kraft's Opening Br. 46. But those assertions provide no

8. That conclusion applies equally to the dependent claims, which the district court meticulously discussed in relation to the teachings of the prior art at issue. *Intercontinental*, 118 F.Supp.3d at 1038–41. On appeal, Kraft makes no meaningful argument about the merits of the district court's document-supported readings. Kraft's assertion that Kraft's expert asserted contrary readings, Kraft's Opening Br. 50–52, is doubly conclusory. Kraft has given no sufficient basis for overturning the grant of summary judgment as to the dependent claims any more than as to the independent claims.

reasonable basis for denying the predictability of using prior-art cookie frames like Graham's in the *Machinery Update* packaging.

It was a "known problem" for cookie consumers that Graham-like packages did not satisfactorily provide for the "multiple openings and closings" that consumers wanted—and that the *Machinery Update* packaging made more convenient. As Kraft says, "[c]onsumer dissatisfaction with this traditional frame-in-wrapper package was well-known." *Id.* at 4. That is what motivated looking to the multiple-use *Machinery Update* packaging. Moreover, Kraft points to no evidence that the Graham-like frames would not work with the *Machinery Update* packaging. Nor does the relied-on testimony say anything actually material about cost: it does not say that the resulting cookie package would cost cookie consumers more than the prior-art cookie package or that any increase would be sufficient to deter the combination. The expert's only point about cost was that the cookie frame was *less* expensive than the *Machinery Update* tray. But that point says nothing to the effect that the relevant (cookie) consumers would face a cost increase were the cookie makers to use the old frame but replace the surrounding wrappers with the *Machinery Update* package.

On this record, we conclude, there is no basis for overturning the district court's conclusion that any reasonable jury would have to find a motivation to combine.

3

[redacted] Kraft's final argument invokes this court's recognition that a "party challenging validity shoulders an enhanced burden if the invalidity argument relies on the same prior art considered during examination." *Tokai*, 632 F.3d at 1367. According to Kraft, that proposition applies here based on the reexamination, in which Graham, the 2002 *Machinery Update* article, and the *Packaging News* article (containing the same photograph as appeared in the 2001 *Machinery Update* article) were considered. *See* Kraft Opening Br. 56–60. It suffices to say, however, that in this case the "enhanced burden" proposition provides no basis for a different result.

The "enhanced burden" point certainly confirms a practical truth about litigation: persuading a fact finder that an expert agency is incorrect on a proposition is likely to be a greater forensic challenge to the advocate than showing the proposition to be incorrect in the absence of a contrary expert-agency determination. *See Sciele Pharma Inc. v. Lupin Ltd.*, 684 F.3d 1253, 1260–61 (Fed. Cir. 2012) ("[I]t may be harder to meet the clear and convincing burden when the invalidity contention is based upon the same argument on the same reference that the PTO already considered. Importantly, whether a reference was before the PTO goes to the weight of the evidence, and the parties are of course free to, and generally do, make these arguments to the fact finder."). This court has not, however, ascribed any larger meaning to the "enhanced burden" point, which, the court has explained, does not mean that something more than clear and convincing evidence is required. *Id.* In any event, this is not a case in which what the PTO concluded makes a difference, for at least two reasons.

First, as the district court explained, the only express analysis of the *Machinery Update* articles was by the examiner, who rejected the claims. The Board, which upheld the claims, did not expressly consider those articles, but relied instead on a sentence in *Packaging News* that does not appear in the *Machinery Update* articles. *Intercontinental*, 118 F.Supp.3d at 1028–29. There is no basis for attributing to the

Board an implied assessment of the *Machinery Update* articles. The record before the Board indicates that the Board simply accepted a premise that those articles were redundant of *Packaging News*, requiring no separate consideration. There is no specific PTO determination of nonobviousness based on the particular prior art now at issue.

Second, in this case, we think that the showing of obviousness is sufficiently strong that no PTO contrary determination could alter the conclusion about summary judgment. If the substantive evidentiary and other arguments made by Kraft do not create a triable issue, as we (and the district court) have concluded, neither could a bare assumption, otherwise unexplained, that the PTO reached a different conclusion based on the prior art here at issue. For that reason as well, we reject Kraft's final deference-invoking argument against summary judgment of obviousness.

* * *

In *Tokai*, this court drew the following conclusion on the record before it in affirming a summary judgment of obviousness: "[T]he undisputed facts in this case—including the state of the prior art, the simplicity and availability of the components making up the claimed invention, and an explicit need in the prior art for [the asserted invention]—compel a conclusion of obviousness as to the subject matter of each of the asserted claims." 632 F.3d at 1371. For the reasons we have set forth, we agree with the district court that the same conclusion is warranted in this case.

B

[redacted] In its cross-appeal, Kellogg argues that the district court erred when it granted Kraft summary judgment rejecting Kellogg's inequitable-conduct charge.[9] The only issue here concerns the arguments Kraft made about *Packaging News* to the Board during reexamination. We see no reversible error in the district court's conclusion that Kellogg's evidence was insufficient to permit a finding of the intent required for inequitable conduct based on Kraft's reexamination arguments.

Kellogg's charge rests on a sentence in the *Packaging News* article—a short article that was the central focus before the Board, including during oral argument, when the Board was specifically looking at and asking about the brief text. The relevant sentence in that article describes the Re–Seal It packaging as *not* using "conventional wrapping film." J.A. 4713. Kellogg says that the sentence is a misprint and that Kraft committed inequitable conduct by not so informing the Board.

[redacted] There is no doubt that the *Packaging Material* sentence was important to the Board's decision: the Board relied on that sentence to reverse the examiner's rejections of Kraft's claims. But to prevail, Kellogg had to prove that Kraft, in what it did not say about the sentence that was the focus of the Board's attention, had a "specific intent to mislead or deceive the PTO." *In re Rosuvastatin Calcium Patent Litig.*, 703 F.3d 511, 519 (Fed. Cir. 2012) (citing *Therasense*, 649 F.3d at 1287). The intent requirement is demanding: the evidence must be "sufficient to *require* a finding of deceitful intent in the light of all the circumstances"; deceptive intent "must be the single most reasonable inference able to be drawn from the evidence"; and "when there are multiple reasonable inferences that may be drawn, intent to deceive cannot be found." *Therasense*, 649 F.3d at 1290–91 (internal quotation marks omit-

9. Neither party has suggested that the unenforceability (of the patent) is of no consequence if the invalidity ruling (as to selected claims) is affirmed.

ted); *see Ohio Willow*, 735 F.3d at 1351; *Ohio Willow Wood Co. v. Alps South, LLC*, 813 F.3d 1350, 1358–59 (Fed. Cir. 2016).

Unlike *Ohio Willow*, this is not a case of withholding documents from the PTO (in *Ohio Willow*, documents key to corroboration of inventorship) or of making affirmative misrepresentations (in *Ohio Willow*, about a key participant's supposed admission somewhere in the record). The Board had the 2002 *Machinery Update* article in the record, but it was not a basis for the examiner's rejections on review and so was not the subject of any discussion before the Board.[10] The alleged wrong, moreover, is not what Kraft affirmatively stated about *Packaging News*. The only alleged wrong is Kraft's omission of any statement that the sentence in the *Packaging News* reference on which the Board was directly focusing was actually a misprint. But even if the sentence was a misprint, the district court properly concluded that the record does not support an inference of deceptive intent under the *Therasense* standard.

Kellogg presents no admission or anything similar indicating that any relevant Kraft officer or representative during the reexamination actually believed the sentence to be a misprint. Kellogg asks for an inference as to what Kraft *had to* believe, given the disparity of language between the *Packaging News* article ("without conventional wrapping film," J.A. 4713) and the 2002 *Machinery Update* article ("with conventional wrapping film," J.A. 4424), that Kraft's counsel had read both articles, and that a representative of a company selling packaging machines that counts Kraft as one of its biggest customers (affiliated with the reexamination requester) testified that, since "we run with conventional film," it was obvious that the *Packaging News* sentence was a misprint, J.A. 6427, 6441. But without more evidence of Kraft's belief, one reasonable inference on the record—especially given Kellogg's burden of persuasion—is that Kraft did not believe that there was a misprint.

Kellogg's evidence from the deposition of Kraft's counsel provides no suggestion of any awareness of a misprint. *See* J.A. 6941–45. The same is true as to Kraft's inventor—appearing also as Kraft's official company witness under Fed. R. Civ. P. 30(b)(6)—who testified that she did not recognize a misprint in *Packaging News* at all, much less one based on the difference in language between it and the 2002 *Machinery Update*, believing that "they were different packaging in different articles," J.A. 6388, and that if there had been a misprint, it would have been corrected, J.A. 6382–83. In the reexamination, moreover, neither the *ex parte* requester nor the examiner suggested that the *Packaging News* article contained a misprint. The absence of such a statement indicates that the alleged misprint was not as obvious as Kellogg claims. The rejections that were then appealed did not involve *Machinery Update*, which therefore need not have been the subject of reinspection by Kraft during the appeal.

In these circumstances, we think that the district court properly concluded that the *Therasense* intent standard could not be met.

III

For the foregoing reasons, we affirm the judgment of the district court.

No costs awarded to either party.

AFFIRMED

10. The 2001 *Machinery Update* article, which contains a photograph identical to that in *Packaging News*, is not in the reexamination record. *See* J.A. 97–99, 679. Kellogg has not asserted inequitable conduct based on the 2001 *Machinery Update* article.

REYNA, Circuit Judge, dissenting-in-part.

For too long, this court has turned a blind eye to what I consider to be a grave concern: the application of a prima facie test that necessarily achieves a legal determination of obviousness prior to full and fair consideration of evidence of objective indicia of non-obviousness.[1] There should be no prima facie rule or test in the obviousness inquiry. Stated differently, the burden of persuasion should not shift from the challenger to the patent holder after a legal determination of obviousness has already been made.

I agree with the majority's decision to affirm the district court's grant of summary judgment of no inequitable conduct. Thus, I join Part IIB of the majority opinion. I disagree, however, with the majority's decision that affirms the district court's grant of summary judgment of obviousness. I would find that the district court improperly found a prima facie case of obviousness before considering Kraft's evidence of objective indicia of nonobviousness. I therefore respectfully dissent from Part IIA of the majority opinion.

Because the majority affirms on obviousness, it does not address the district court's finding of no literal infringement. Because I believe the district court erred on obviousness, I would address the infringement issue. The district court changed its construction of the claim term "sealing layer" between its *Markman* order and summary judgment order, resulting in a conclusion of non-infringement. That midstream change was dispositive, and because Kraft had no opportunity to address the new construction, the district court's summary judgment was erroneous. I dissent.

I.

A. Statutory Requirement of Non-Obviousness

In 1952, Congress amended the Patent Act to, *inter alia*, require that patents be non-obvious. 35 U.S.C. § 103; 2 Donald S. Chisum, Chisum on Patents § 5.02[4] ("In Section 103 of the Patent Act of 1952, Congress for the first time gave express legislative recognition to the judicially-developed doctrine that something more than strict novelty is required in order to support a patent."). Section 103 codified what the common law already had required for a century. *See Hotchkiss v. M. Greenwood & Co.*, 52 U.S. (11 How.) 248, 13 L.Ed. 683 (1850). A claimed invention is unpatentable "if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains." 35 U.S.C. § 103.[2]

1. Objective indicia of non-obviousness are often referred to as "secondary considerations." *See, e.g., Graham v. John Deere Co.*, 383 U.S. 1, 17, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966). I prefer to use "objective indicia" to properly signify their evidentiary role and prevent any misperception that they are less important than, *i.e.*, secondary to, other non-obviousness factors relevant in determining whether a claimed invention would have been obvious. *See In re Cyclobenzaprine*, 676 F.3d 1063 (Fed. Cir. 2012) (using "objective indicia"); *Truswal Sys. Corp. v. Hydro-Air Eng'g Inc.*, 813 F.2d 1207, 1212 (Fed. Cir. 1987) ("That evidence is 'secondary' in time does not mean that it is secondary in importance."); 2 Donald S. Chisum, Chisum on Patents § 5.05 ("To emphasize the importance of what the *Graham* decision referred to as 'secondary considerations,' many Federal Circuit opinions refer to them as 'objective considerations' and list such considerations as a fourth factual inquiry.").

2. An earlier version of § 103 controls this case, but any differences do not impact this analysis.

B. Supreme Court Precedent

The Supreme Court first addressed § 103 in *Graham v. John Deere Co.*, 383 U.S. 1, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966). The Court set forth the framework for determining whether patent claims would have been obvious:

> Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.

Id. at 17–18, 86 S.Ct. 684 (citation omitted). The Court noted that objective indicia of non-obviousness are "more susceptible of judicial treatment" than the other "highly technical facts" relevant to an obviousness analysis. *Id.* at 36, 86 S.Ct. 684. Objective indicia "may lend a helping hand to the judiciary" that "is most ill-fitted to discharge the technological duties cast upon it by patent legislation." *Id.* Objective indicia, the Court wrote, help guard against hindsight and "the temptation to read into the prior art the teachings of the invention in issue." *Id.*[3]

More recently, the Supreme Court clarified the obviousness analysis in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S.Ct. 1727, 167 L.Ed.2d 705 (2007). It explained that trial courts must consider the four *Graham* factors to determine whether an asserted claim would have been obvious: (1) the scope and content of prior art; (2) the differences between the prior art and asserted claims; (3) the level of ordinary skill; and (4) objective indicia of non-obviousness. *KSR*, 550 U.S. at 406, 127 S.Ct. 1727 (citing *Graham*, 383 U.S. at 17–18, 86 S.Ct. 684). The Court noted that "the sequence of these questions might be reordered in any particular case." *Id.* at 407, 127 S.Ct. 1727. It also cautioned factfinders to consider "the distortion caused by hindsight bias" and "be cautious of arguments reliant upon *ex post* reasoning." *Id.* at 421, 127 S.Ct. 1727. In *KSR*, however, the patentee's minimal evidence of objective indicia did not "dislodge" the obviousness determination. *Id.* at 426, 127 S.Ct. 1727. Thus, the Supreme Court held that the asserted claim would have been obvious. *Id.*[4]

To be clear, nothing in *Graham* or *KSR* requires courts to analyze the first three *Graham* factors first, make a prima facie determination of obviousness, and only then examine objective indicia of non-obviousness. Such a prima facie framework excludes objective indicia in the primary

3. Objective indicia include commercial success, long-felt but unsolved need, failure of others, industry praise, unexpected results, and copying. *See Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1058 (Fed. Cir. 2016) (en banc); *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1367 (Fed. Cir. 2012); *In re Cyclobenzaprine*, 794 F.Supp.2d 517, 538 (D. Del. 2011), *rev'd in part*, 676 F.3d 1063 (Fed. Cir. 2012). For more than a century, the Supreme Court has recognized the utility of objective indicia of non-obviousness in adjudicating patent validity. *See Smith v. Goodyear Dental Vulcanite*, 93 U.S. (3 Otto) 486, 494–95, 23 L.Ed. 952 (1877) (discussing long-felt but unmet need and professional approval).

4. The party asserting obviousness—here, Kellogg—bears the burden of proof by clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 95, 131 S.Ct. 2238, 180 L.Ed.2d 131 (2011).

analysis and artificially creates a heightened standard of proof for objective indicia. I am not aware of any Supreme Court authority that endorses—let alone requires—the prima facie framework.

C. Federal Circuit Precedent

This court explained the basic obviousness analysis in *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530 (Fed. Cir. 1983). In *Stratoflex*, the district court concluded that the claimed inventions were "plainly obvious." 713 F.2d at 1539. As a result, it refused to analyze objective indicia of non-obviousness. *Id.* We held that such an approach was error, noting that each *Graham* factor "is but an aid" in determining whether the claimed invention would have been obvious. *Id.* at 1537. And although we discussed objective indicia after the other three *Graham* factors, we elaborated at length about their importance:

> It is jurisprudentially inappropriate to disregard any relevant evidence on any issue in any case, patent cases included. Thus evidence rising out of the so-called "secondary considerations" must always when present be considered en route to a determination of obviousness. Indeed, evidence of secondary considerations may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to have been obvious in light of the prior art was not. It is to be considered as part of all the evidence, not just when the decisionmaker remains in doubt after reviewing the art. . . . En route to a conclusion on obviousness, a court must not stop until all pieces of evidence on that issue have been fully considered and each has been given its appropriate weight. Along the way, some pieces will weigh more heavily than others, but decision should be held in abeyance, and doubt maintained, until all the evidence has had its say.

Id. at 1538–39 (citations omitted). In light of the district court's failure to consider the objective indicia, we did so in the first instance. *Id.* at 1539. Giving "full consideration" of objective indicia such as alleged commercial success, industry praise, and long-felt but unmet need, we concluded that the claims would have been obvious and thus affirmed the district court under the harmless error rule. *Id.* at 1540.

More recently, we discussed the role of objective indicia in *Cyclobenzaprine*, 676 F.3d at 1063. In that case, the district court engaged in a three-step analysis to determine whether a certain drug extended-delivery method would have been obvious. First, under the heading "Prior art," it described four prior art references. *In re Cyclobenzaprine*, 794 F.Supp.2d 517, 534–35 (D. Del. 2011), *rev'd in part*, 676 F.3d 1063 (Fed. Cir. 2012). In the next section, with the heading "Prima facie case," the district court determined that "a person of ordinary skill in the art would have been motivated to take a group of known elements to create an extended release version of cyclobenzaprine, and to have a reasonable expectation of success in doing so." *Id.* at 537. It also concluded that certain properties and delivery methods would have been obvious. *Id.* at 536–37. Only later, under the heading "Secondary considerations," did the court analyze the patentee's objective indicia of non-obviousness. *Id.* at 537. Finding that the objective indicia did not "overcome the prima facie case of obviousness," the district court granted summary judgment of obviousness. *Id.* at 536.

On appeal, we reversed the district court's obviousness determination. We explained that the purpose of objective indicia of non-obviousness is to refute the evidence of obviousness. *Cyclobenzaprine*, 676 F.3d at 1077. That a patent owner may submit this evidence on objective indicia

does not mean, however, that the burden shifts to the patent owner to prove non-obviousness. *Cyclobenzaprine*, 676 F.3d at 1079–80. The district court must consider all evidence, including objective indicia of non-obviousness, before making an ultimate conclusion of obviousness. *Id.* at 1080. We criticized the district court for "impos[ing] a burden-shifting framework in a context in which none exists." *Id.* at 1075.

In *Cyclobenzaprine*, we emphasized our earlier statement that " 'evidence of secondary considerations may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to be obvious in light of the prior art was not.' " *Id.* at 1075–76 (quoting *Stratoflex*, 713 F.2d at 1538). We noted that some Federal Circuit opinions have used the "prima facie" and "rebuttal" language, but we cautioned that "those cases should not be interpreted as establishing a formal burden-shifting framework." *Id.* at 1077. Instead, we interpreted our precedent to hold that "all evidence relevant to obviousness or nonobviousness [must] be considered, and considered collectively." *Id.* at 1078. Objective indicia of non-obviousness, we stated, are not mere, after-the-fact considerations relegated to secondary status. *Id.* They are essential safeguards against hindsight bias. *Id.* at 1079.

D. Post–*Cyclobenzaprine* Use Of Prima Facie Framework

After *Cyclobenzaprine*, some of this court's decisions have continued to endorse the prima facie framework. *See, e.g.*, *Cubist Pharm., Inc. v. Hospira, Inc.*, 805 F.3d 1112, 1130 (Fed. Cir. 2015) ("We sustain the district court's determination that the secondary consideration evidence did not overcome the showing of obviousness based on the prior art."); *Novo Nordisk A/S v. Caraco Pharm. Labs., Ltd.*, 719 F.3d 1346, 1353–54 (Fed. Cir. 2013) ("The mere fact that the court conducted [the obviousness] analysis using terms such as 'overcome' and 'prima facie' does not necessarily imply that it shifted the burden of persuasion onto [the patent owner].").

In light of mixed messages coming from our court—endorsement of a prima facie framework on one hand but insistence to view the evidence as a whole on the other—trial courts have continued to find a prima facie case of obviousness before turning to objective indicia as rebuttal evidence. Despite *Cyclobenzaprine*'s warnings, burden-shifting remains common among trial courts. *See, e.g.*, *Bayer Pharma AG v. Watson Labs., Inc.*, 183 F.Supp.3d 579, 589 (D. Del. 2016) ("Under relevant law, once a prima facie case of obviousness has been established, the burden then shifts to the applicant to present evidence of secondary considerations of non-obviousness to overcome this prima facie showing."); *B–K Lighting, Inc. v. Vision3 Lighting*, 930 F.Supp.2d 1102, 1116–17 (C.D. Cal. 2013) (stating that the patent owner bears the burden of presenting evidence to rebut a prima facie case of obviousness); *Bristol–Myers Squibb Co. v. Teva Pharm. USA, Inc.*, 923 F.Supp.2d 602, 675 (D. Del. 2013) ("With [the alleged infringer] having met its burden to establish a prima facie case of obviousness, the Court will go on to consider the fourth *Graham* factor: facts regarding objective indicia of nonobviousness."); *Hitkansut LLC v. United States*, 127 Fed.Cl. 101, 113 (2016) (stating that the patent owner "incorrectly assumes that secondary considerations are part of [the alleged infringer's] burden in proving obviousness. Instead, evidence of secondary considerations is in the nature of rebuttal evidence. ... A patentee typically comes forward with proof of secondary considerations of validity, or 'non-obviousness,' in rebuttal to a patent challenger's prima facie case of ob-

viousness.") (alterations, quotation marks, and citation omitted).

E. This Court's "Prima Facie" Framework Does Not Comport With Supreme Court Precedent

Although this court highlighted the dangers associated with the prima facie framework in *Cyclobenzaprine*, we have not diligently instructed trial courts to abandon the framework altogether.[5] The time to do so has come. One commentator has stated that "*Cyclobenzaprine* was unrealistic" if it intended to ban district courts from making prima facie findings of obviousness prior to consideration of objective indicia. Chisum § 5.05. I am not the first member of this court to state that such a ban is necessary. *See Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 748 (Fed. Cir. 2013) (Newman, J., dissenting) ("[T]he proper analysis of obviousness under 35 U.S.C. § 103 requires that all evidence relevant to obviousness or nonobviousness be considered, and be considered collectively, without resort to presumptions of prima facie obviousness or burden-shifting.") (quotation marks omitted); *Wm. Wrigley Jr. Co. v. Cadbury Adams USA LLC*, 683 F.3d 1356, 1367 (Fed. Cir. 2012) (Newman, J., dissenting) ("The district court, holding that a prima facie case of obviousness was established on the prior art alone, shifted the burden of proof to the patentee to rebut the asserted, but improper, prima facie case with the evidence of commercial success and copying. This is a distortion of the burden of proof, which never leaves the challenger.").

Objective indicia of non-obviousness must be considered from the outset, and the burden of proof should never leave the challenger. The purpose of our patent system is the promotion of the progress of science and useful arts. U.S. Const. art. 1, § 8, cl. 8. This purpose is undermined by premature findings of obviousness and over-invalidation of innovative patents. *Novo Nordisk*, 719 F.3d at 1365 (Newman, J., dissenting).

The prima facie approach to obviousness jumbles the proper order of operations. "Prima facie" refers to evidence that is "[s]ufficient to establish a fact or raise a presumption unless disproved or rebutted." *Prima Facie*, Black's Law Dictionary (10th ed. 2014). Whether a party has made a prima facie case is a legal determination. *See Takeda Chem. Indus., Ltd. v. Alphapharm Pty.*, 492 F.3d 1350, 1356 (Fed. Cir. 2007) (calling the prima facie test "consistent with the legal principles enunciated in *KSR*").

Consistent with the prima facie approach endorsed by some of our past decisions, the district court here proceeded in four steps: it (1) considered the first three *Graham* factors; (2) made a legal prima facie determination of obviousness; (3) considered objective indicia of nonobviousness; and (4) made an ultimate conclusion of obviousness. Steps one and three are factual, whereas steps two and four are legal. It is clear to me that courts are making a legal determination of obviousness at step two. As a result, all of the facts concerning patentability are not considered. This is error.

I read Supreme Court and Federal Circuit precedent to require all factual analysis to occur prior to achieving a legal conclusion on non-obviousness. This should be done without resort to an intermediate

5. The majority notes, and I do not dispute, that the use of "prima facie" is a "not-uncommon choice of words" in our past precedent. Maj. Op. at 1345–46; *see also* Chisum § 5.05 ("Federal Circuit decisions have held that, in particular cases, secondary considerations, though relevant, failed to overcome a 'strong' prima facie case of obviousness based on the prior art.").

prima facie conclusion. *See, e.g., Graham,* 383 U.S. at 36, 86 S.Ct. 684 (not making a prima facie conclusion and instead reserving any legal conclusion until after discussion of all factual predicates); *KSR,* 550 U.S. at 426, 127 S.Ct. 1727 (same); *Apple,* 839 F.3d at 1058 (same); *Cyclobenzaprine,* 676 F.3d at 1081–83 (same); *Stratoflex,* 713 F.2d at 1539 (same). Thus, I would instruct the district court to abandon the prima facie framework and instead proceed in two steps: (1) consider all factual evidence, both favoring and disfavoring a finding of obviousness; and (2) make a legal conclusion of obviousness. *Accord Wm. Wrigley Jr. Co.*, 683 F.3d at 1370 (Newman, J., dissenting); Robert A. Matthews, Jr., Annotated Patent Digest § 18:93 ("A court should consider evidence of secondary considerations together with the evidence alleged to create a prima facie case of obviousness *before* determining whether an invention is or is not obvious. In other words, secondary considerations do not come into play only to rebut a prima facie case of obvious, (even though that is often how they are considered during prosecution). Rather, the considerations factor in to the initial determination of obviousness.").

I recognize there are practical limitations of legal analysis and writing. A court's opinion must be linear and cover only one issue at a time. Typically, discussion of the objective indicia of non-obviousness comes last in an obviousness analysis. There is nothing inherently wrong with this order per se. Again, Supreme Court precedent is instructive. The Court discussed objective indicia of non-obviousness last in *Graham.* 383 U.S. at 35–36, 86 S.Ct. 684. So too in *KSR.* 550 U.S. at 426, 127 S.Ct. 1727. But in both cases, the Court made no "prima facie" finding of obviousness, did not relegate objective indicia into an afterthought, and reserved its legal conclusion for after discussion of all relevant factual inquiries. *Id.* Our seminal Federal Circuit decisions have done the same. *See Apple,* 839 F.3d at 1058; *Cyclobenzaprine,* 676 F.3d at 1081–83; *Stratoflex,* 713 F.2d at 1539. But the notion that objective criteria are considered after a legal prima facie showing is made has taken root like a spreading vine. This gives rise to cases, such as this case on appeal, where a court determines that a particularly "strong" prima facie showing has been made, making it difficult if not impossible for adequate weighing of evidence of objective indicia of non-obviousness.

This case presents a textbook example of why courts should not make *any* determinations of obviousness, prima facie or otherwise, prior to considering objective indicia of non-obviousness. Here, Kellogg responded to Kraft's patent infringement suit by alleging that Kraft's patent was invalid for obviousness. Kellogg presented evidence of prior art that it alleged a person of ordinary skill would have been motivated to combine.

In response to Kellogg's evidence of obviousness, Kraft presented at least three objective indicia of nonobviousness. The district court wrote that Kraft "has offered substantial evidence from which a jury could find that its invention has been commercially successful." J.A. 29. Kraft presented evidence that its sales volume increased four percent due to the invention. J.A. 28. It also presented "evidence of positive consumer feedback" and survey results showing that the invention "was a clear favorite for nearly all" survey respondents. J.A. 29. The court also found that Kraft introduced evidence of long-felt but unsolved need. *Id.* It explained that Kraft won "one of the highest industry awards innovative packaging technology can receive" and pointed to "many industry publications" praising the technology. *Id.* Finally, Kraft presented evidence "show[ing] that Kellogg intentionally cop-

ied [Kraft's] packaging." *Id.* The court found this evidence of copying to be "compelling." *Id.*

I am left to wonder how "substantial" and "compelling" evidence of objective indicia cannot overcome a prima facie showing. If such significant evidence does not make a difference in this case, it is hard to imagine a situation in which it would.

An observer noted that "the law, with respect to the importance of secondary considerations or objective indicia, is going through a transformation." J. Jeffrey Hawley, *The Resurgence of "Secondary Considerations"*, 16 FLA. COASTAL L. REV. 1, 23 (2014). I hope so. *Cyclobenzaprine* was a step in the right direction. We should finish what *Cyclobenzaprine* started and prohibit prima facie findings of obviousness prior to consideration of objective indicia of non-obviousness.

II.

Because it affirms on obviousness grounds, the majority does not discuss the district court's grant of summary judgment of no literal infringement. Because I would reverse the obviousness determination, I would review the infringement finding. I would find reversible error in the district court's claim construction, which led to its finding of no literal infringement.

Kraft sued Kellogg for, *inter alia*, literal infringement of the '532 patent. Central to Kraft's infringement allegation was the claim term "sealing layer," which appears in claim 1 of the '532 patent. The parties disputed the construction of "sealing layer" in their claim construction briefs and at the claim construction hearing.

Following briefing and argument, the district court issued a *Markman* order construing "sealing layer." The court concluded that the '532 patent claims require "the sealing layer to be a distinct layer from the top of the container." J.A. 44. The court went on:

> *This does not mean, however, that the sealing layer must be physically separated from the top of the container or, more specifically, from the wrapper that forms the top of the container as described in claim 1.* In particular, the requirement of a distinct layer does not preclude the sealing layer from being laminated to another layer or layers of the wrapper. One layer of material that is laminated to another is no less a distinct layer. In other words, *"distinct" and "separate" have different meanings* in this context.

J.A. 45 (emphases added). Neither party disputes that this construction, as expressed in the *Markman* order, is correct.

In its subsequent summary judgment order, however, the court construed "sealing layer" differently. The summary judgment order stated that the sealing layer "must be a separate piece of material." J.A. 32. This construction was outcome-determinative: The court noted that it granted summary judgment of no literal infringement "based on [its] construction of the claim term, 'sealing layer.'" J.A. 31; *see also id.* ("Because the top and cut-out flap are not 'distinct layers' in the accused products—rather, they are part of the same layer—Kellogg does not literally infringe the sealing layer limitation.").

The court's new construction at summary judgment contradicts its *Markman* construction that stated the sealing layer did *not* need to be a separate piece of material. This distinction is critical because if the sealing layer need not be separate from the top of the container, then a reasonable jury could conclude that Kellogg literally infringed the '532 patent. The majority opinion fails to address this issue at all, either in its recitation of the facts or its analysis of the law. Kraft was entitled to a consistent construction of "sealing layer" throughout the case, or, at minimum, to

have an opportunity to respond to the court's new construction. *Cf. Cordis Corp. v. Bos. Sci. Corp.*, 658 F.3d 1347, 1355 (Fed. Cir. 2011) (holding that while a court may clarify its construction after a jury verdict, it may not apply an altogether different construction); *SAS Inst., Inc. v. ComplementSoft, LLC*, 825 F.3d 1341, 1351–52 (Fed. Cir. 2016) (stating, in the agency context, that while the Patent Trial and Appeal Board may adopt a claim construction in its Final Written Opinion, it may not change constructions "midstream"). Because Kraft did not have an opportunity to respond to the midstream change in the meaning of "sealing layer," I would reverse the grant of summary judgment of no literal infringement.

I respectfully dissent from judgment of the majority to: (1) affirm the district court's grant of summary judgment of obviousness and (2) not address the court's claim construction error.

James L. KISOR, Claimant-Appellant

v.

David J. SHULKIN, Secretary of Veterans Affairs, Respondent-Appellee

2016-1929

United States Court of Appeals, Federal Circuit.

Decided: September 7, 2017