

**United States Court of Appeals
for the Federal Circuit**

**BLACKBIRD TECH LLC, DBA BLACKBIRD
TECHNOLOGIES,**
Plaintiff-Appellant

v.

**ELB ELECTRONICS, INC., ETI SOLID STATE
LIGHTING INC., FEIT ELECTRIC COMPANY INC.,**
Defendants-Appellees

2017-1703

Appeal from the United States District Court for the District of Delaware in Nos. 1:15-cv-00056-RGA, 1:15-cv-00057-RGA, 1:15-cv-00058-RGA, 1:15-cv-00062-RGA, Judge Richard G. Andrews.

Decided: July 16, 2018

SEAN KEVIN THOMPSON, Blackbird Technologies, Boston, MA argued for plaintiff-appellant. Represented by WENDY VERLANDER; CHRISTOPHER FREEMAN, Chicago, IL; STAMATIOS STAMOULIS, Stamoulis & Weinblatt LLC, Wilmington, DE.

JOHN HINTZ, Maynard, Cooper & Gale, PC, New York, NY, argued for all defendants-appellees.

PHILIP A. ROVNER, Potter Anderson & Corroon, LLP, Wilmington, DE, for defendant-appellee ETi Solid State Lighting Inc. Also represented by JONATHAN A. CHOA, ALAN R. SILVERSTEIN; DAVID PETER HOCHBERG, Walter Haverfield LLP, Cleveland, OH.

Before PROST, *Chief Judge*, MOORE and REYNA, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* MOORE.

Dissenting opinion filed by *Circuit Judge* REYNA.

MOORE, *Circuit Judge*.

Blackbird Tech LLC (“Blackbird”) appeals the U.S. District Court for the District of Delaware’s entry of judgment of noninfringement of claim 12 of U.S. Patent No. 7,086,747 (“’747 patent”) based on its construction of “attachment surface.” Because the court erred in construing “attachment surface,” we vacate and remand.

BACKGROUND

Blackbird owns the ’747 patent, which is directed to energy efficient lighting apparatuses. ’747 patent at Abstract, 2:24–3:16. One embodiment, illustrated in Figure 5 below, discloses retrofitting an existing light fixture with a more energy efficient lighting apparatus. *Id.* at 9:1–10:28.

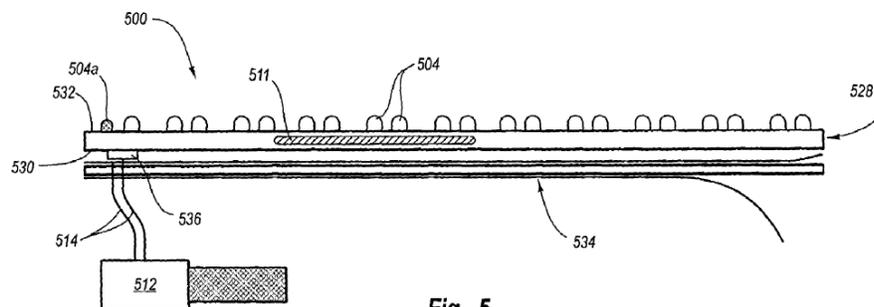


Fig. 5

Id. at Fig. 5. This embodiment depicts a lighting apparatus 500, which includes a housing 528 that is dimensioned to be installed to an existing ballast cover¹ (not shown). *Id.* at 9:12–16. The housing has an attachment surface 530 and an illumination surface 532 at opposite ends. *Id.* at 9:16–20. In “typical operation” the attachment surface is secured to the ballast cover of the existing light fixture through a fastening mechanism 534. *Id.* at 9:16–19, 9:36–51.

Blackbird sued ELB Electronics, Inc., ETi Solid State Lighting Inc., and Feit Electric Company, Inc. (collectively, “Defendants”) for infringing claim 12 of the ’747 patent. It recites:

12. An energy-efficient lighting apparatus for retrofit with an existing light fixture having a *ballast cover*, comprising:

a housing having an *attachment surface* and an *illumination surface*;

a plurality of illumination surface holes in the illumination surface;

a circuit board comprising a plurality of light-emitting diodes, wherein the circuit board is positioned adjacent the housing so that the plurality of light-emitting diodes protrude through the plurality of illumination surface holes in the illumination surface; and

¹ The specification explains that the ballast is an electronic component that maintains a current through the fluorescent lights to illuminate them. *Id.* at 5:1–14, 65–67. The ballast cover conceals the ballast and other wiring. *Id.* at 5:2–4.

a fastening mechanism for securing the attachment surface of the lighting apparatus to the illumination surface, wherein the lighting apparatus is coupled to a wall switch and wherein the illumination of the light-emitting diodes is controllable based upon the position of the wall switch.

The parties disputed the meaning of “attachment surface,” specifically whether the attachment surface must be secured to the ballast cover. Blackbird proposed construing “attachment surface” as “layer of the housing to which the illumination surface is secured,” and Defendants proposed “layer of the housing that is secured to the ballast cover and to which the illumination surface is secured.” J.A. 7. The district court construed “attachment surface” as “layer of the housing that is secured to the ballast cover.” J.A. 7–9.

Following claim construction, Blackbird stipulated to noninfringement, and the district court entered judgment in favor of Defendants. Blackbird timely appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

We review claim construction based solely on intrinsic evidence de novo. *Poly-Am., L.P. v. API Indus., Inc.*, 839 F.3d 1131, 1135–36 (Fed. Cir. 2016). “The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

We conclude that the district court erred in construing “attachment surface” to be secured to the ballast cover. By its plain language, claim 12 does not require the attachment surface to be secured to the ballast cover. Claim 12 expressly recites a fastening mechanism for

securing the attachment surface to the illumination surface. It does not refer to any other fastening mechanism. It does not require the attachment surface be secured to anything other than the illumination surface.

The district court nevertheless read in a second fastening mechanism—this one to secure the attachment surface to the ballast cover. As discussed, the specification discloses an embodiment for an energy efficient lighting apparatus that can be retrofitted on an existing fixture, and that embodiment describes a fastener that connects the ballast cover to the attachment surface. *See, e.g.*, '747 patent at 2:65–3:10, 9:1–10:28, Fig. 5. We do not agree that this fastener limitation should be imported into the claim.

There is no suggestion in the specification or prosecution history that this fastener is important in any way that would merit reading it into claim 12. In fact, in describing the embodiment in Figure 5, the specification explains that the fastening can be achieved by “many different types of fastening mechanisms” including “an adhesive strip” (think tape), “a magnet, clips, screws, etc.” '747 patent at 9:40–51. It never refers to this run-of-the-mill fastener as the “present invention” or “an essential element” or uses any other language that would cause the ordinarily skilled artisan to believe that this fastening mechanism is an important component of the invention or that it is critical to the invention for any reason.² *See,*

² This fastener is also mentioned in the “Summary of the Invention.” '747 patent at 2:65–3:10. The Summary of the Invention often spans many paragraphs, columns, or even pages. In cases where we have held limitations ought to be read in, it was not simply because those limitations appeared in the Summary of the Invention. There was specific language that made clear those limitations were important to the claimed invention. *See,*

e.g., *Luminara Worldwide, LLC v. Liown Elecs. Co.*, 814 F.3d 1343, 1353 (Fed. Cir. 2016) (noting we have found disavowal or disclaimer based on statements such as “the present invention includes” or “the present invention is”); *X2Y Attenuators, LLC v. Int’l Trade Comm’n*, 757 F.3d 1358, 1362 (Fed. Cir. 2014) (noting we have held labeling an embodiment or element as “essential” may constitute disavowal and finding disavowal where the specification stated a disclosure was an “essential element among all embodiments or connotations of the invention”); *Regents of Univ. of Minn.*, 717 F.3d at 936 (finding disavowal where the specification used the phrase “[t]he present invention”); *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007) (same); *Honeywell Int’l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1312, 1318 (Fed. Cir. 2006) (same); *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343–45 (Fed. Cir. 2001) (same and “all embodiments of the present invention”). We cannot discern, nor does any party argue that there is, a technologically significant reason to have the fastening mechanism secure the attachment surface to the ballast cover. At oral argument, a number of different, technologically unsophisticated mechanisms for fastening were discussed. Oral Arg. at 20:10–20:35, 21:28–22:14. No party argued that the fastening mechanism securing the attachment surface to the ballast cover was an important feature of the claimed invention. Nor is there any such suggestion in either the intrinsic or extrinsic evidence. To the contrary, the specification explains the embodiment in Figure 5 is exemplary and non-limiting. ’747 patent at 4:16–27, 10:29–32. It also explains that it is in “typical operation” that the attachment

e.g., *Regents of Univ. of Minn. v. AGA Med. Corp.*, 717 F.3d 929, 936 (Fed. Cir. 2013) (finding disclosures in the Summary of the Invention limiting where directed to “[t]he present invention”).

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surface is secured to the ballast cover. *Id.* at 9:17–19. It simply cannot be the case that every screw mentioned in an embodiment of the specification must be read into the claim. Without any evidence that the fastener is important, essential, or critical to the invention, it should not be read in as a claim limitation.

And possibly the most important reason why the fastener for connecting the attachment surface to the ballast cover disclosed in an embodiment ought not be imported into the claim is because that limitation was originally present in claim 12 and was expressly eliminated during prosecution. Claim 12 was initially rejected under 35 U.S.C. § 102(b), and the applicant made responsive amendments not relevant here. The examiner then had an interview with the applicant. He prepared the examiner's summary of the interview, which stated the applicant agreed to amend claim 12 "to resolve 112 issues." J.A. 56. That amendment deleted "ballast cover" and replaced it with "illumination surface." J.A. 54. That is, the applicant expressly eliminated from the claim a fastening mechanism that secures the attachment surface to the ballast cover and replaced it with a fastening mechanism that secures the attachment surface to the illumination surface. The claim was allowed. No ordinary artisan could read the prosecution history as anything other than eliminating the requirement that a fastening mechanism secures the attachment surface to the ballast cover. No other possible reason was suggested or alleged in this case.

Defendants argue the prosecution history is ambiguous because the examiner's requirement that the change be made "to resolve [§] 112 issues" provides no explanation for the amendment. This argument is both factually incorrect and legally irrelevant to how a skilled artisan reading this history would understand the claim scope. The examiner stated, and the applicant never contradicted, that the amendment was required for § 112 reasons.

Any skilled artisan would understand that if an examiner requires an amendment for § 112 reasons it is an amendment required for patentability. As a factual matter, no skilled artisan would understand this claim to require a fastening mechanism connecting the ballast cover to the attachment surface when that very limitation was expressly removed from the claim to secure patentability with the examiner's blessing and agreement. We review the prosecution history from the perspective of an ordinary artisan and what he would understand from its contents. The only takeaway here is that claim 12 needs a fastening mechanism to secure the attachment surface to the illumination surface, not to the ballast cover, because this was the only change made at the examiner's request for § 112 reasons. A person of ordinary skill in the art may not be able to divine what transpired between the applicant and the examiner in that interview that caused the change in claim language and scope. That is irrelevant to the issue. We look at what an ordinarily skilled artisan would understand *about claim scope* from reading the prosecution history. *See, e.g., Fenner Invs., Ltd. v. Celco P'ship*, 778 F.3d 1320, 1323 (Fed. Cir. 2015) (“Any explanation, elaboration, or qualification presented by the inventor during patent examination is relevant, for the role of claim construction is to ‘capture *the scope of the actual invention*’ that is disclosed, described, and patented.” (emphases added)); *Biogen Idec, Inc. v. GlaxoSmithKline LLC*, 713 F.3d 1090, 1095 (Fed. Cir. 2013) (“[T]he entirety of a patent's file history captures the public record of the patentee's representations concerning the scope and meaning of the claims.”); *Hynix Semiconductor Inc. v. Rambus Inc.*, 645 F.3d 1336, 1350 (Fed. Cir. 2011) (“*Phillips* counsels looking to the prosecution history to ‘show what a person of skill in the art would have understood disputed claim language to mean.’”); *Arachnid, Inc. v. Medalist Mktg. Corp.*, 972 F.2d 1300, 1302 (Fed. Cir. 1992) (noting that claim scope is determined by examining the prosecution history). And here, without

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question, the requirement that the invention as claimed requires a fastening mechanism for securing the attachment surface to the ballast cover was undisputedly and unequivocally deleted from the claim.

Defendants argue the preamble, “[a]n energy-efficient lighting apparatus for retrofit with an existing light fixture having a ballast cover,” requires reading in the disclosed fastener for the claim to achieve its “retrofit” function. A requirement such as this, according to Defendants, is sufficient not only to read into a claim a limitation that is not present, but also to read into the claim the precise mechanism by which that retrofitting shall be achieved. The only claim at issue is claim 12, and it is an apparatus, not a method claim. The apparatus disclosed in claim 12 is structurally complete as claimed. An apparatus claim is not required to include all elements necessary for the claimed structure’s installation. This claim does not recite how the lighting apparatus is installed into an existing light fixture, and it is not required to do so.

We have considered Defendants’ remaining arguments and find them unpersuasive.

CONCLUSION

We conclude the district court erred in construing “attachment surface,” and adopt Blackbird’s construction of “layer of the housing to which the illumination surface is secured.” Because the court’s entry of judgment of noninfringement was based on its erroneous construction, we vacate the entry of judgment and remand for further proceedings.

VACATED AND REMANDED

COSTS

Costs to Blackbird.

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REYNA, *Circuit Judge*, dissenting.

The sole issue on appeal is whether the “attachment surface” in claim 12 must be secured to the ballast cover of the existing light fixture. Because I conclude that the district court correctly construed “attachment surface” to mean “layer of the housing that is secured to the ballast cover,” I respectfully dissent.

Claim 12 does not expressly require that the attachment surface be attached to anything other than to the illumination surface. However, claim 12 does expressly

describe a lighting apparatus “for *retrofit* with an existing light fixture *having a ballast cover*.” ’747 patent col. 11 ll. 26–27 (emphases added). The majority fails to give meaning to these claim terms by holding that “attachment surface” means “layer of the housing to which the illumination surface is secured,” and concludes that the patent owner is entitled to patent scope that is neither described in nor supported by the specification.

The plain language of claim 12, read in the context of the specification, implicitly requires that the attachment surface be secured to the ballast cover to achieve the retrofit function. Apart from the preamble, which the parties agree is limiting, claim 12 contains no reference to the ballast cover, the existing light fixture, or where or how the apparatus is retrofit with the existing light fixture. Because the only feature of the existing light fixture described in claim 12 is the ballast cover, a person of ordinary skill would necessarily conclude that the attachment surface is secured to the ballast cover of the existing light fixture. This would not be a big leap.

The disputed term “attachment surface” appears only in claims related to the retrofit function—namely claim 12, the disputed claim, claim 29, which describes a method for retrofitting a light fixture, and various associated dependent claims. As the word “retrofit” in the preamble of claim 12 implies securing the lighting apparatus *to* something, it is reasonable to conclude that the “attachment surface” is involved with achieving the retrofit function.

The structure of the claim language gives further support that the “attachment surface” has a function associated with the retrofit function. Along with the “illumination surface,” the attachment surface is one of two identified surfaces of the lighting apparatus’s housing, and is secured to the illumination surface via a

fastening mechanism. *See id.* col. 11 ll. 28–29, 37–39. The illumination surface has an explicit function in addition to simply being secured to the attachment surface, suggesting that the attachment surface likewise has an additional “attachment” function other than attachment to the illumination surface. *See id.* col. 11 ll. 30–31.

Every single embodiment of the retrofit lighting apparatus in the specification describes securing the attachment surface to the ballast cover of the existing light fixture. The specification expressly discloses retrofitting by securing the attachment surface to the ballast cover in the summary of the invention, *see* ’747 patent col. 2 l. 65–col. 3 l. 10; col. 3 ll. 46–49 (describing “[a] method for retrofitting a light fixture with an energy-efficient lighting apparatus,” in which “[t]he method also involves *securing the attachment surface of the housing to the ballast cover*” (emphasis added)), and in the embodiment disclosed in connection with Figure 5, *see id.* col. 9 ll. 8–10. In describing Figure 5, the specification states that “[i]n typical operation, the attachment surface 530 is secured to the ballast cover.” *Id.* col. 9 ll. 17–19. The specification provides no other explanation for how the lighting apparatus may be retrofit to the existing light fixture. Taken collectively, these disclosures in the claims and the specification—and the lack of any reference in the intrinsic record showing the attachment surface being secured to anything other than the ballast cover—teach a skilled artisan that the attachment surface described in claim 12 is secured to the ballast cover of the existing light fixture. *See MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1329 (Fed. Cir. 2007) (“The words of patent claims have the meaning and scope with which they are used in the specification and the prosecution history.”).

The majority ignores the retrofit function that the attachment surface plays in the lighting apparatus. *See*

Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1319 (Fed. Cir. 2005) (“It is . . . entirely proper to consider the functions of an invention in seeking to determine the meaning of particular claim language.”). Instead of recognizing the attachment surface as it is described throughout the specification—namely, to secure the lighting apparatus to the ballast cover—the majority’s construction merely parrots features of the attachment surface, i.e., that it is attached to the illumination surface. In doing so, the majority fails to give meaning to “attached” beyond what is already described in the claim language. See *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1237 (Fed. Cir. 2016) (“Ideally, claim constructions give meaning to all of a claim’s terms.”). The majority’s construction completely disregards the context in which “attachment surface” is used, both in connection with the retrofit function and the embodiments described in the specification. The majority does not point to anything in the specification describing a retrofit apparatus in which the attachment surface is not secured to the ballast cover. And there is no suggestion in the record that such an embodiment was ever contemplated or possessed by the inventor.

The majority’s construction thus opens the door for the ’747 patent to be subsequently invalidated for failure to satisfy the written description requirement. Stated differently, the majority’s construction is a route towards rendering the patent invalid. See *Carman Indus., Inc. v. Wahl*, 724 F.2d 932, 937 (Fed. Cir. 1983) (“Claims should be so construed, if possible, as to sustain their validity. If such a construction would result in invalidity of the claims, the appropriate legal conclusion is one of noninfringement, not invalidity.”). The majority likewise invites an enablement challenge; under the majority’s approach, the retrofit aspect of the invention is merely an afterthought, one for which a skilled artisan must figure

out for themselves the means by which the retrofit function of the invention shall be achieved, without any guidance from the patent. *See* Maj. Op. at 9. This result is absurd, given that when the patent is read as a whole, such guidance is clearly provided.

Worse still, because the majority's construction "does not recite how the lighting apparatus is installed into an existing light fixture," *id.*, the majority effectively reads the retrofit function out of claim 12 and claim 29, the retrofitting method claim. Claim 29, while not at issue in this case, is instructive. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc) ("Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims."). Claim 29 contains the same "attachment surface" limitation at issue in claim 12:

29. A method for *retrofitting* a light fixture with an energy-efficient lighting apparatus, the light fixture having a ballast cover, the method comprising:

providing a housing having an attachment surface and an illumination surface, wherein the illumination surface comprises a plurality of illumination surface holes;

providing a circuit board comprising a plurality of light-emitting diodes;

positioning the circuit board adjacent the housing so that the plurality of light-emitting diodes protrude through the plurality of illumination surface holes in the illumination surface; and

securing the attachment surface of the housing to the illumination surface, wherein the lighting apparatus is coupled to a wall switch and

wherein the illumination of the light-emitting diodes is controllable based upon the position of the wall switch.

'747 patent, col. 12 ll. 52–60 (emphasis added).

We cannot discount the importance of the retrofit aspect to the invention as a whole. The specification clearly details the importance of retrofitting energy-efficient lighting apparatuses into preexisting light fixtures as a means of achieving energy savings without incurring significant expense. '747 patent, col. 9 ll. 5–10; col. 10 ll. 6–9. Yet the majority contends that claim 12, as an apparatus claim, is structurally complete as construed and need not describe the method of installation. Maj. Op. at 9. But because the majority's construction does not disclose how the apparatus is installed, securing the retrofit apparatus to the preexisting light fixture falls outside of the scope of the claims. If "attachment surface" is not construed as being secured to the ballast cover, claim 29 utterly fails to disclose how the retrofit function is to be achieved. As the district court properly noted during the *Markman* hearing, the lighting apparatus for retrofit "ha[s] to be attached to something" and cannot "hover . . . like a ghost." J.A. 254.

The majority's reliance on the prosecution history is similarly misplaced. The prosecution history "can often inform the meaning of the claim language by demonstrating how the inventor understood the invention" but "lacks the clarity of the specification and thus is less useful for claim construction purposes." *Phillips*, 415 F.3d at 1317; *see also Grober v. Mako Prods., Inc.*, 686 F.3d 1335, 1341 (Fed. Cir. 2012) ("[W]hile the prosecution history can inform whether the inventor limited the claim scope in the course of prosecution, it often produces ambiguities created by ongoing negotiations between the inventor and the PTO."). The original claim 12 reveals that, prior to

amendment, the applicant understood that the invention requires the attachment surface to be secured to the ballast cover. *See Phillips*, 415 F.3d at 1317. Apart from the amendment itself, the prosecution history sheds no light on the purpose or effect of the amendment on claim scope. I conclude that the amendment is ambiguous as to the scope of the disputed limitation and has no effect on the proper construction of “attachment surface” in claim 12. An ambiguous amendment, such as here, should not negate the evidence in the specification and the conclusion implicit in the claim language that the attachment surface is secured to the ballast cover.

Because the intrinsic record fully supports the construction of attachment surface as being secured to the ballast cover, I respectfully dissent.