

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GRIMCO, INC.,
Petitioner,

v.

PRINCIPAL LIGHTING GROUP, LLC,
Patent Owner.

IPR2021-00968
Patent 9,311,835 B2

Before KARL D. EASTHOM, JO-ANNE M. KOKOSKI, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

KOKOSKI, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Grimco, Inc. (“Petitioner”) filed a Petition to institute an *inter partes* review of claims 1–20 (the “challenged claims”) of U.S. Patent No. 9,311,835 B2 (“the ’835 patent,” Ex. 1001). Paper 2 (“Pet.”). Principal Lighting Group, LLC (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). With Board authorization (Paper 9), Petitioner filed a Reply to the Preliminary Response (“Reply,” Paper 10), and Patent Owner filed a Sur-reply to Petitioner’s Reply (“Sur-reply,” Paper 12).

Institution of an *inter partes* review is authorized by statute when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314 (2018); *see also* 37 C.F.R. § 42.4 (2020). Upon consideration of the Petition, the Preliminary Response, the Reply, the Sur-Reply, and the evidence of record, we determine that Petitioner has established a reasonable likelihood of prevailing with respect to the unpatentability of at least 1 claim of the ’835 patent, and we decline to exercise our discretion to deny institution. Accordingly, for the reasons that follow, we institute an *inter partes* review of claims 1–20 of the ’835 patent.

A. *Real Parties-in-Interest*

Each party identifies itself as the real party-in-interest. Pet. 116; Paper 6, 1.

B. *Related Proceedings*

The parties indicate that the ’835 patent is asserted in *Principal Lighting Group, LLC v. Grimco, Inc.*, No. 6:20-cv-00998 (W.D. Tex.) (the “District Court Action”). Pet. 116; Paper 6, 1.

C. The '835 Patent

The '835 patent, titled “Lighting Mount for Interior-Lighted Signage and Method of Retrofitting a Lighted Sign,” is directed to lighting mounts that facilitate the replacement of lighted signs that were originally manufactured for use with gas-discharge lamps such as fluorescent or neon tube lamps. Ex. 1001, code (54), 1:37–42. The disclosed lighting mounts allow for replacing the gas-discharge lamps “with alternative lamps such as low-voltage LED lamps or the like.” *Id.* at 1:37–42. The '835 patent describes a lamp support assembly that includes an elongate support member that is capable of supporting a plurality of electric lamp units, such as LED lamp units, with end caps attached to the opposite ends of the elongate support member. *Id.* at 1:49–56. Each end cap has an inwardly-facing side for engaging with the elongate support member, and an outwardly-facing side with a mechanical coupling element that is configured to engage with a standard mount “such as a mount designed for supporting a gas-discharge lamp.” *Id.* at 1:56–61. The '835 patent teaches that “[t]he elongate support member and the end caps are releasably supportable by and between a corresponding pair of the standard mounts when the standard mounts are supported in spaced arrangement on respective frame portions of the sign.” *Id.* at 1:63–67. The '835 patent also describes a method for retrofitting an internally-lighted sign that is fitted with one or more gas-discharge lamps that includes: (1) removing the gas-discharge tube from the corresponding pairs of electro-mechanical couplings positioned along the interior of the sign; (2) cutting an elongate support member to fit between the respective pair or pairs of electro-mechanical couplings; (3) positioning the end caps on the elongate support member; (4) positioning one or more electric lamp units along the elongate support member; and (5) using the end caps to attach the

elongate support member with the electric lamp units to the pair of electro-mechanical couplings. *Id.* at 2:1–14.

D. Illustrative Claims

Petitioner challenges claims 1–20 of the '835 patent. Pet. 1–3. Claims 1, 13, and 19 are independent, illustrative of the claimed subject matter, and reproduced below.

1. A lamp support assembly for interior lighting of a sign, said lamp support assembly comprising:

an elongate support member for supporting a plurality of electric lamp units, said elongate support member having opposite end portions;

one and only one end cap at each of said opposite end portions of said elongate support member, each of said end caps having an inwardly-facing side and an outwardly-facing side, said inwardly-facing sides configured to frictionally engage and be supported at a respective one of said opposite end portions of said elongate support member;

a mechanical coupling element at each of said outwardly-facing sides of said end caps, said mechanical coupling element configured to engage in a single electro-mechanical mount for a gas-discharge lamp, wherein said mechanical coupling element comprises electrically insulative material and does not retain any electrical conductors along or through said mechanical coupling element for powering the plurality of electric lamp units; and

wherein said elongate support member and said end caps are releasably supportable by and between two and only two of the mounts when the two mounts are aligned directly opposite one another and supported in spaced arrangement on respective frame portions of the sign.

Ex. 1001, 8:59–9:17.

13. A method of retrofitting an internally-lighted sign that is fitted with one or more gas-discharge lamps, said method comprising:
- removing one or more gas-discharge lamps from between one or more respective pairs of gas-discharge lamp couplings positioned directly opposite from one another along an interior of the sign;
 - positioning and frictionally engaging respective end caps at opposite end portions of an elongate support member, wherein the end caps are made of electrically insulative material and do not retain any electrical conductors along or through said end caps for powering said plurality of electric lamp units;
 - positioning one or more electric lamp units along the elongate support member; and
 - engaging each of the end caps in a non-conductive manner with a respective one and only one of the gas-discharge couplings or with a respective one and only one replacement coupling to thereby position the end caps, the elongate support member, and the electric lamp units between the gas-discharge lamp couplings or replacement couplings that are positioned directly opposite from one another.

Id. at 9:61–10:17.

19. A retrofit kit for an internally-lit sign, the sign having a framework and at least one display sheet that is at least partially translucent, said kit comprising:
- an elongate support member for supporting a plurality of electric lamp units, said elongate support member having opposite end portions;
 - a plurality of low-voltage lamp units for positioning along the elongate support member;
 - a pair of end caps configured to frictionally engage the opposite end portions of the elongate support member, each of the end caps having one and only one mechanical coupling element at an outwardly-facing

side thereof, wherein the end caps are made of electrically insulative material and do not retain any electrical conductors along or through said mechanical coupling element for powering said plurality of electric lamp units; and wherein respective mechanical coupling elements of the pair of end caps are configured to non-electrically engage respective individual standard mounts located directly opposite one another at the framework that are for supporting a single gas-discharge lamp at the framework.

Id. at 10:42–62.

E. References Relied Upon

Petitioner relies on the references listed below (Pet. 1–2):

Reference	Date	Exhibit No.
US Patent No. 7,441,922 B2 (“Huang”)	Oct. 28, 2008	1005
US Patent App. Pub. No. 2010/0270925 A1 (“Withers”)	Oct. 28, 2010	1006
US Patent No. 8,083,373 B2 (“Zimmerman”)	Dec. 27, 2011	1007
US Patent App. Pub. No. 2009/0316408 A1 (“Villard”)	Dec. 24, 2009	1008
US Patent No. 7,360,316 B2 (“Hoover”)	Apr. 22, 2008	1009
US Patent No. 7,049,761 B2 (“Timmermans”)	May 23, 2006	1010
US Patent No. 5,063,486 (“Cummings”)	Nov. 5, 1991	1011
WO 98/50218 (“Gefri”)	Nov. 12, 1998	1012
US Patent No. 7,307,391 B2 (“Shan”)	Dec. 11, 2007	1013
US Patent App. Pub. No. 2009/0073693 A1 (“Nall”)	Mar. 19, 2009	1014
US Patent App. Pub. No. 2009/0219720 A12 (“Reed”)	Sep. 3, 2009	1015

F. Asserted Grounds

Petitioner asserts that the challenged claims are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	References
1, 8–10, 13, 15–17, 19	103	Huang, Zimmerman
2, 3, 6, 7, 11	103	Huang, Zimmerman, Villard
4, 5	103	Huang, Zimmerman, Villard, Hoover
2, 6, 7, 11	103	Huang, Zimmerman, Timmermans
4, 5	103	Huang, Zimmerman, Timmermans, Hoover
8	103	Huang, Zimmerman, Cummings
12	103	Huang, Zimmerman, Gefri, Shan
14	103	Huang, Zimmerman, Nall
18, 20	103	Huang, Zimmerman, Reed
1, 8–10, 12, 13, 15–17, 19	103	Withers, Hoover, Zimmerman
2–7, 11	103	Withers, Hoover, Zimmerman, Villard
8	103	Withers, Hoover, Zimmerman, Cummings
12	103	Withers, Hoover, Zimmerman, Shan
14	103	Withers, Hoover, Zimmerman, Nall
18, 20	103	Withers, Hoover, Zimmerman, Reed

Pet. 2–3. Petitioner relies on the Declaration of Dr. Zane Coleman (“Coleman Declaration,” Ex. 1003) in support of its contentions.

II. ANALYSIS

A. Discretionary Denial Under 35 U.S.C. § 314(a)

Under 35 U.S.C. § 314(a), the Director has discretion to deny institution of an *inter partes* review. *Cuozzo Speed Techs., LLC v. Lee*,

136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *SAS Inst. v Iancu*, 138 S. Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question *whether* to institute review.”); *Harmonic v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”).

In determining whether to exercise discretion to deny institution under 35 U.S.C. § 314(a), the Board considers the trial date in related litigation as part of an assessment of all relevant circumstances of the case, including the merits, in an effort to balance considerations such as system efficiency, fairness, and patent quality. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11, 5–6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv* Order”); *see also NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8, 19–20 (PTAB Sept. 12, 2018) (precedential) (denying institution relying, in part, on § 314(a) because the parallel district court proceeding was scheduled to finish before the Board reached a final decision). In particular, the Board evaluates the following factors (“*Fintiv* factors”):

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Fintiv Order, 5–6. In evaluating these factors, “the Board takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6.

Patent Owner argues that we should exercise our discretion under 35 U.S.C. § 314(a) to deny institution based on the parallel District Court Action between the parties. Prelim. Resp. 9–21. We have considered the circumstances and facts before us in view of the *Fintiv* factors and determine that the circumstances presented here weigh against exercising discretion under § 314(a) to deny institution of *inter partes* review.

1. Factor 1: Likelihood of a Stay

If a Petitioner has sought and obtained a stay of related litigation pending resolution of an *inter partes* review, that generally weighs against exercising discretion to deny institution. *Fintiv* Order, 6. Although Petitioner states that it “intends to seek a stay in the district court,” there is no evidence in the record indicating that Petitioner has requested a stay. Pet. 114. Thus, we find this factor to be neutral. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (informative) (explaining that factor 1 generally “does not weigh for or against discretionary denial” when neither party has requested a stay).

2. Factor 2: Proximity of Trial Date to the Board’s Projected Statutory Deadline

Trial in the District Court Action is scheduled to begin on September 22, 2022. Paper 11, 1; Ex. 2029. Given the statutory deadlines, our latest possible date for issuance of a final written decision in this proceeding is in November 2022, one year after we issue this decision instituting *inter partes* review. 35 U.S.C. §§ 314(c), 316(a)(11); *see also* 37 C.F.R. § 42.100(c). Thus, our final written decision would issue

approximately two months after the start of the trial. We determine that this factor weighs slightly in favor of exercising our discretion to deny institution. *See Fintiv* Order, 9 (“If the court’s trial date is earlier than the projected statutory deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution under *NHK*.”).

3. *Factor 3: Investment in the Proceedings*

Patent Owner argues that the parties “have respectively prepared and exchanged voluminous infringement and invalidity contentions” and claim construction briefing, and that the district court’s *Markman* hearing “will have concluded by the time the Board is expected to render its institution decision.” Prelim. Resp. 14–15 (citing Ex. 2015, 2–3). Patent Owner also argues that “Petitioner and Patent Owner are scheduled to respectively prepare and serve final infringement and invalidity contentions before the November 24, 2021 institution decision deadline,” and, by that time, “fact discovery in the District Court Action will have been underway for two months.” *Id.* at 15 (citing Ex. 2015, 3).

Fintiv provides the following guidance with respect to factor 3:

[I]f, at the time of the institution decision, the district court has issued substantive orders related to the patent at issue in the petition, this fact favors denial. Likewise, district court claim construction orders may indicate that the court and parties have invested sufficient time in the parallel proceeding to favor denial. If, at the time of the institution decision, the district court has not issued orders related to the patent at issue in the petition, this fact weighs against exercising discretion to deny institution under *NHK*.

Fintiv Order, 9–10. *Fintiv* explains that “[t]his investment factor is related to the trial date factor, in that more work completed by the parties and the court in the parallel proceeding tends to support the arguments that the

parallel proceeding is more advanced, a stay may be less likely, and instituting would lead to duplicative costs.” *Id.* at 10. In this case, fact discovery opened on September 23, 2021 and extends until April 20, 2022, expert discovery will close on June 15, 2022, and dispositive motions are due on June 29, 2022. Ex. 2029, 1; Ex. 2030, 4. The district court issued preliminary constructions for several claim terms (Ex. 2031), and maintained those preliminary constructions after holding a *Markman* hearing (Ex. 2032). We also note that the parties were scheduled to serve final infringement and invalidity contentions on November 17, 2021. Ex. 2030, 3. Nevertheless, significant efforts remains at this stage of the District Court Action as outlined above with respect to expert and fact discovery, dispositive motions, and other jury trial efforts.¹

In the investment factor, *Fintiv* further addressed the matter of petition timing, noting that “notwithstanding that a defendant has one year to file a petition, it may impose unfair costs to a patent owner if the petitioner, faced with the prospect of a looming trial date, waits until the district court trial has progressed significantly before filing a petition at the Office.” *Fintiv* Order, 11. Patent Owner argues that Petitioner waited “over three years from receiving Patent Owner’s initial notice of infringement and nearly seven months from the time Patent Owner filed its Complaint in the District Court Action” to file the Petition. Prelim. Resp. 19 (emphases omitted). Patent Owner argues that this delay “all but guaranteed that the District

¹ Patent Owner also argues that “[t]he District Court and Patent Owner have also invested ‘significant’ effort and resources’ in” a previous proceeding that “involved the relevant claims of the ’835 Patent.” Prelim. Resp. 15–17. Petitioner was not a party to that proceeding, and we are not persuaded that it is relevant to our determination here.

Court Action would reach trial meaningfully before a [final written decision] on its Petition would issue.” *Id.* As Petitioner notes, however, Patent Owner filed its preliminary infringement contentions in the District Court Action on April 30, 2021, and Petitioner filed this Petition less than three weeks later on May 17, 2021. Pet. 114, 117. We find that Petitioner’s diligence in filing the Petition less than one month after receiving Patent Owner’s preliminary infringement contentions in the District Court Action weighs against exercising our discretion to deny institution. *Fintiv* Order, 11 (“If the evidence shows that the petitioner filed the petition expeditiously, such as promptly after becoming aware of the claims being asserted, this fact has weighed against exercising the authority to deny institution under *NHK*.”).

For these reasons, we determine that this factor weighs against exercising discretion to deny institution.

4. *Factor 4: Overlap of Issues*

Patent Owner argues that Petitioner relies on the same prior art references in the Petition and in Petitioner’s invalidity contentions in the District Court Action, and is seeking construction of the same claim terms in the district court as it is in this proceeding. Prelim. Resp. 18. Petitioner, however, filed a stipulation in the District Court Action stating that Petitioner

stipulates that if the Patent Trial and Appeal Board institutes IPR in IPR2021-00968, then Grimco will not pursue in this case the specific grounds identified above in connection with the ’835 Patent claims, or on any ground for which the Board institutes, that was raised or could have been reasonably raised in the IPR (i.e., any ground that could be raised under §§ 102 or 103 on the basis of prior art patents or printed publications).

Ex. 3003, 2.² Petitioner’s stipulation is similar to that provided in *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18–19 (PTAB Dec. 1, 2020) (precedential), which was found to mitigate concerns of duplicative efforts and possibly conflicting decisions between the Board and the district court, thus ensuring that the *inter partes* review is a “true alternative” to the district court proceeding. Accordingly, we find that this factor weighs strongly against exercising discretion to deny institution.

5. *Factor 5: Whether the Petitioner and the Defendant in the Parallel Proceeding are the Same Party*

There is no dispute that Petitioner is a party to the District Court Action. Pet. 116; Prelim. Resp. 18. Accordingly, we determine that this factor weighs slightly in favor of exercising discretion to deny institution.

6. *Factor 6: Other Circumstances, Including the Merits*

Patent Owner argues that “the 15 Grounds raised in the Petition are particularly weak as evidenced not just due to the number of Grounds and references Petitioner has found itself having to rely on, but also” due to technical and legal deficiencies. Prelim. Resp. 20. Patent Owner also argues that the Office “explicitly reviewed much of the same prior art and arguments Petitioner raises in its Petition.” *Id.* (citing Prelim. Resp. 21–31). Patent Owner further argues that Petitioner failed to address known evidence of secondary consideration of non-obviousness in the Petition. *Id.* (citing Pet. 113).

² Petitioner states in its Reply that it “included as Exhibit 1036 its Stipulation of Invalidity Contentions that it filed” in the District Court Action (Reply 1), but the record does not include Exhibit 1036. We therefore enter a copy of the Stipulation into the record as Exhibit 3003.

We have reviewed Petitioner’s unpatentability arguments and Patent Owner’s responses thereto, and we disagree with Patent Owner that the merits are “particularly weak.” Rather, we find that Petitioner has shown a reasonable likelihood of success on the merits as discussed herein. Although Petitioner has met its burden for institution, we do not find that Petitioner’s showing is “particularly strong” so as to weigh against exercising discretion to deny institution. *See Fintiv* Order, 14–15 (noting that the merits favor institution under factor 6 “if the merits of a ground raised in the petition seem particularly strong”).

We are also not persuaded, on this record, that Petitioner’s failure to address what Patent Owner describes as “two separate settlement/license [agreements] directly related to the ’835 Patent” is a “failure to address known evidence of secondary considerations [that] weighs in favor of” exercising our discretion to deny institution. Prelim. Resp. 20 (citing *Stryker Corp. v. KFx Medical, LLC*, IPR2019-00817, Paper 10 at 28–29 (PTAB Sept. 16, 2019)). Although the Board has “cautioned petitioners in prior proceedings that petitions may be denied if they do not address known evidence of secondary considerations,” those prior proceedings are distinguishable because, in each case, evidence of objective indicia of non-obviousness was considered in a prior proceeding of which Petitioner was aware. *See, e.g., Stryker*, IPR2019-00817, Paper 10 (finding that Petitioner’s failure to address objective indicia evidence from a previous litigation weighs in favor of denying institution); *Robert Bosch Tool Corp. v. SD3 LLC*, IPR2016-01751, Paper 15 (PTAB Mar. 22, 2017) (denying institution for failure to address objective indicia presented during an ITC proceedings); *Coalition for Affordable Drugs V LLC v. Hoffman-LaRoche, Inc.*, IPR2015-01792, Paper 14 (PTAB Mar. 11, 2016) (denying institution

for failure to address objective indicia considered by the Examiner during the original prosecution).

Accordingly, we determine that this factor is neutral.

7. Holistic Assessment of Factors

We have considered the circumstances before us in view of the *Fintiv* factors. Because our analysis is fact driven, no single factor is determinative of whether we exercise our discretion to deny institution under § 314(a). Evaluating the *Fintiv* factors with a holistic view of whether the efficiency and integrity of the system are best served by denying or instituting review, we decline to exercise our discretion under 35 U.S.C. § 314(a) to deny the Petition.

B. Discretionary Denial Under 35 U.S.C. § 325(d)

Patent Owner argues that we should exercise our discretion under 35 U.S.C. § 325(d) to deny institution “because various prior art relied on by Petitioner was previously considered and distinguished during prosecution of” the ’835 patent. Prelim. Resp. 21.

1. Legal Framework

Section 325(d) provides that, in determining whether to institute an *inter partes* review, “the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” The Board uses a two-part framework for evaluating arguments under § 325(d):

(1) determining whether the same or substantially the same art previously was presented to the Office, or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of the first part of the framework is satisfied, determining whether the petitioner has demonstrated that the Office erred in a manner material to

the patentability of the challenged claims. *Advanced Bionics, LLC v. MED-El Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential). In applying this framework, we consider the *Becton, Dickinson*³ factors that address discretion to deny when a petition present the same or substantially the same prior art or arguments previously presented to the Office, including:

(a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination; (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art; (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson, Paper 8 at 17–18. If, after review of factors (a), (b), and (d), we determine that the same or substantially the same art or arguments previously were presented to the Office, then factors (c), (e), and (f) relates to whether the petitioner demonstrates that the Office erred in a manner material to the patentability of the claims. *Advanced Bionics*, Paper 6 at 10.

2. Relevant Prosecution History

During prosecution, the Examiner first rejected originally-filed claims directed to a retrofit kit for an internally-lit sign as being anticipated by Zimmerman, and those directed to a lamp support assembly and a method of

³ *Becton, Dickinson & Co. v. B. Braun Mesungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph).

retrofitting an internally-lighted sign as having been obvious over the various combinations of Yang, Zimmerman, Rhoades, Faubion, and Lee. Ex. 1002, 116–125. Notably, the claims as originally filed did not contain a limitation requiring that the end caps be comprised of electrically insulative material. *Id.* at 181–184. In response, the applicant amended pending independent claim 1 to include “said mechanical coupling element does not comprise any electrical conductors,” and pending independent claims 13 and 19 to include “wherein the end caps are made of electrically insulative material and do not include any electrical conductors extending therethrough.” *Id.* at 102, 104–105. In support of the amendment, the applicant argued that because “Yang discloses only fixtures in which mechanical coupling elements or other end closures or end caps that include a provision for electrical power transmission,” and “Zimmerman’s lighting assembly includes fluorescent tube adapters that are made of electrically insulating material,”

it would not be obvious to modify Yang according to Zimmerman because such a modification would render Yang’s light fixture inoperable and/or unsuitable for its intended purpose, because Yang’s light fixtures are all designed and configured to receive power through their endcaps or housing closures at the ends of each light fixture.

Id. at 107–108.

The Examiner rejected the amended claims, asserting that Yang’s “end caps correspond to the mechanical coupling that does not comprise electrical conductors.” Ex. 1002, 96. The applicant then further amended pending independent claim 1 to clarify that the “end caps having a mechanical coupling element at each outwardly-facing side of the end caps, where the mechanical coupling element does not retain any electrical

conductors along or through the mechanical coupling elements in order to power the plurality of electric lamp units.” *Id.* at 75, 80. The applicant also reiterated its argument that it would not be obvious to modify Yang according to Zimmerman because such a modification would render Yang inoperable or unsuitable for its intended purpose. *Id.* at 80–81.

After receiving a Final Office Action rejecting all of the pending claims (Ex. 1002, 86–97), and an Advisory Action Before Filing an Appeal Brief (*id.* at 63–64), the applicant submitted an Amendment After Final Rejection in which, in relevant part, pending independent claim 1 was further amended to state that “said mechanical coupling element comprises electrically insulative material” (*id.* at 47). The applicant argued that

Zimmerman is cited only for its teaching of a plurality of lighting units mounted to frame portions in a sign. Zimmerman’s lighting assembly includes fluorescent tube adapters that are made of electrically insulating material. It is respectfully submitted that it would not be obvious to modify Yang according to Zimmerman because such a modification would render Yang’s light fixture inoperable or unsuitable for its intended purpose, since Yang’s light fixtures are all designed and configured to receive power through their endcaps or housing closures at the ends of each lighting fixture.

Id. at 53–54 (internal citations omitted). After an applicant-initiated interview in which the applicant and the Examiner discussed claim amendments “to be entered by Examiner’s Amendment,” the Examiner issued a Notice of Allowability. *Id.* at 21–27.

3. Analysis

Patent Owner argues that “the Examiner during prosecution rejected pre-issuance claims as anticipated and obvious over the Zimmerman reference—relied on every one of Petitioner’s 15 Grounds—as well as the Yang, Wu, and Faubion references cited in the Petition.” Prelim. Resp. 25–

26. Patent Owner argues that “the prosecution history explicitly states that ‘Zimmerman’s lighting assembly includes fluorescent tube adapters that are made of electrically insulating material,’” and that “Zimmerman in its entirety was cited and relied on to initially reject the claims.” *Id.* at 26 (quoting Ex. 1002, 53). Patent Owner also argues that (1) Huang “is cumulative of Faubion (which was reviewed during prosecution)”; (2) Withers “is cumulative of the Yang reference cited during prosecution”; and (3) Timmermans is cumulative of Rhodes, which Patent Owner identifies as “art of record.” Prelim. Resp. 27–30.

Petitioner contends that “the Examiner never applied Zimmerman for the teaching of end caps ‘made of electrically insulating material’ as being relied upon in the Petition.” Reply 4 (citing Ex. 1002, 88, 90, 94–95, 117–118, 119, 121). Petitioner notes it was the Patent Owner, not the Examiner, that stated that “Zimmerman’s lighting assembly includes fluorescent tube adapters that are made of electrically insulating material,” and that Patent Owner also “expressly acknowledges that ‘Zimmerman is cited only for teaching of a plurality of lighting units mounted to frame portions in a sign.’” *Id.* at 4–5 (citing Ex. 1002, 53). Petitioner also contends that in the Petition “Zimmerman is merely a secondary reference applied to teach end caps ‘made of electrically insulative material’” and “Patent Owner’s reliance on Zimmerman in the § 325(d) analysis is of little probative value.” *Id.* at 4.

Petitioner further contends that Patent Owner’s arguments regarding whether Huang and Withers are cumulative of Faubion and Yang are “based on nothing more than side by side figures, without any further written elaboration.” Reply 1–2. Petitioner asserts that unlike Faubion and Yang, which disclose replacement lamps where power is supplied through the lamp’s end caps via an electrical connection, Huang and Withers “teach

powering lamps through power cords that are external to the end caps” and are not cumulative. *Id.* at 2–3 (citing Ex. 1005, 2:18–32; Ex. 1006 ¶¶ 6, 22; Ex. 1016 ¶ 22; Ex. 1021 ¶¶ 34, 37–40).

The record shows that Petitioner presents the same or substantially the same prior art for one reference (Zimmerman) in a minor capacity. *See* Section II.A.2, *supra*; *Square, Inc. v. 4361423 Canada Inc.*, IPR2019-01650, Paper 11 at 6–9 (PTAB April 28, 2020). In particular, the Examiner rejected the claims over the combination of Yang and Zimmerman, and the associated rationale was largely based on the disclosures of Yang, with Zimmerman relied upon for its teaching of “a plurality of lighting units being mounted to frame portions in a sign in a retro-fit manner.” Ex. 1002, 88–89, 119–120. Huang and Withers are the primary prior art references relied upon in the Petition. *See, e.g.*, Pet. 23–43, 73–98. That is, Petitioner relies on the disclosures of Huang or Withers as teaching all of the limitations of the independent claims, save for the reliance on Zimmerman in combination for teaching the portion of the independent claims directed to the end caps comprising electrically insulative material, and on Hoover (only in combination with Withers and Zimmerman) as teaching frictionally engaging end caps to the elongate support member. *Id.* at 25–37, 40–43, 79–85, 87–90, 94–98. Therefore, in view of the primary reliance on Huang or Withers, there are material differences between the asserted art here and the prior art involved during examination. Further, Patent Owner’s only support for its argument that Huang and Withers are cumulative of other art cited during prosecution is the side-by-side reproductions of figures that appear in each of the references which, on this record, is insufficient to establish that there is overlap, much less substantial overlap, between the arguments during examination and Petitioner’s reliance on the prior art. *See* Prelim.

Resp. 27–29. Nor do we discern any overlap, as neither Huang nor Withers were at issue during prosecution, and the arguments during examination were directed to a different reference. Accordingly, neither condition of the first part of the two-part framework, that is, substantially the same art or argument, is satisfied for the exercise of discretion under 35 U.S.C. § 325(d), and we decline to exercise our discretion to deny institution under § 325(d). *See Square, Inc.*, Paper 11 at 7–9.

C. Level of Ordinary Skill in the Art

Petitioner contends that a person having ordinary skill in the art would have had “at least a bachelor’s degree in mechanical engineering, electrical engineering, and/or physics and at least four years’ experience designing lighting equipment.” Pet. 19–20 (citing Ex. 1003 ¶ 26). Petitioner further contends that such a person “would understand concepts associated with lights, such as different types of light sources (*e.g.*, LEDs, fluorescent, neon, etc.)” and “would be familiar with existing lighting equipment and their components—such as lighting mounts—and would know how to modify lighting equipment based on various design criteria.” *Id.* at 20 (citing Ex. 1003 ¶ 26). Patent Owner neither addresses Petitioner’s proposed definition, nor offers its own proposed definition.

For purposes of this Decision, we adopt Petitioner’s proposed definition, which is undisputed on this record, and is consistent with the level of skill in the art at the time of the invention as reflected in the prior art in this proceeding. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (explaining that specific findings regarding ordinary skill level are not required “where the prior art itself reflects an appropriate level and a need for testimony is not shown” (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985))).

D. Claim Construction

We construe each claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b). Under this standard, claim terms are generally given their plain and ordinary meaning as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). Only those terms in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner proposes a construction for the terms “frictionally engage”/“frictionally engaging” in independent claims 1, 13, and 19. Pet. 20–23. Patent Owner asserts that “[c]laim construction is not necessary for the Board to make a determination whether to institute this IPR.” Prelim. Resp. 32. For purposes of this Decision, based on the record before us, we determine that none of the claim terms requires an explicit construction.

E. Obviousness over Huang and Zimmerman

Petitioner contends that claims 1, 8–10, 13, 15–17, and 19 would have been obvious over the combined teachings of Huang and Zimmerman. Pet. 23–43.

1. Overview of Huang

Huang “relates to lamps and more particularly, to a LED lamp that can directly be installed in a conventional fluorescent bulb holder to substitute for a conventional fluorescent bulb.” Ex. 1005, 1:6–9.

Huang’s Figure 2 is reproduced below.

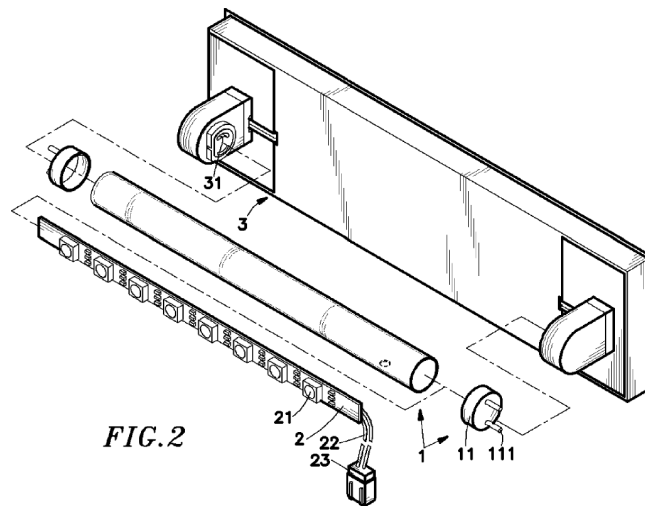


Figure 2 is an exploded view of the LED lamp tube described by Huang. *Id.* at 1:66–67. LED lamp tube 1, which can be transparent or translucent in order to admit light, has two end caps 11 respectively capped on the distal ends thereof. *Id.* at 2:20–23. End caps 11 each have mounting pins 111 for installation in connectors 31 of fluorescent bulb holder 3. *Id.* at 2:23–25. Circuit board 2, with plurality of LEDs 21 installed on one side and power cord 22 with electric plug 23 extending out of one end, is mounted in tube 1. *Id.* at 2:27–33. End caps 11 “hold the circuit board 2 firmly inside the tube 1, keeping the LEDs suspending inside the tube 1 and the power cord 22 extending out of tube 1.” *Id.* at 2:33–37. Mounting pins 111 in end caps 11 are then fastened to connectors 31 of fluorescent bulb holder 3. *Id.* at 2:37–40. Huang teaches that when one or some of the LEDs 21 fail, “the user can detach the LED lamp tube from the fluorescent bulb holder 3, and

then open one end cap 11 from the tube 1, and then remove the circuit board 2” to replace the failed LEDs. *Id.* at 2:49–52.

Huang also describes an embodiment with two circuit boards attached together back-to-back, and another with four circuit boards arranged to form a rectangle, where each circuit board arrangement uses one common power cord. *Id.* at 2:57–3:3. Huang further teaches that end caps 11 can have “a set of mounting pins 111 adapted to fit different connectors 31 of any of a variety of conventional fluorescent bulb holders 3,” and, before installation, “the user can break the unnecessary mounting pins 111 from the end caps 11” to leave only the pins desired to make the specific connection to connectors 31. *Id.* at 3:5–15.

2. *Overview of Zimmerman*

Zimmerman “generally relates to a means of easily replacing the fluorescent lighting in backlit signs with longer lasting, lower maintenance, more power efficient light emitting diode modules.” Ex. 1007, 1:6–9. In particular, Zimmerman explains that it provides “a low-cost, environmentally hardened, reliable LED assembly designed and configured [to] provide uniform lighting and trouble-free use in application,” and that “the simplicity of the design makes the assembly extremely easy to install whether being put directly into an [original equipment manufacturer] fixture, or being used to retrofit an existing fluorescent fixture.” *Id.* at 2:35–42.

Zimmerman's Figure 1 is reproduced below.

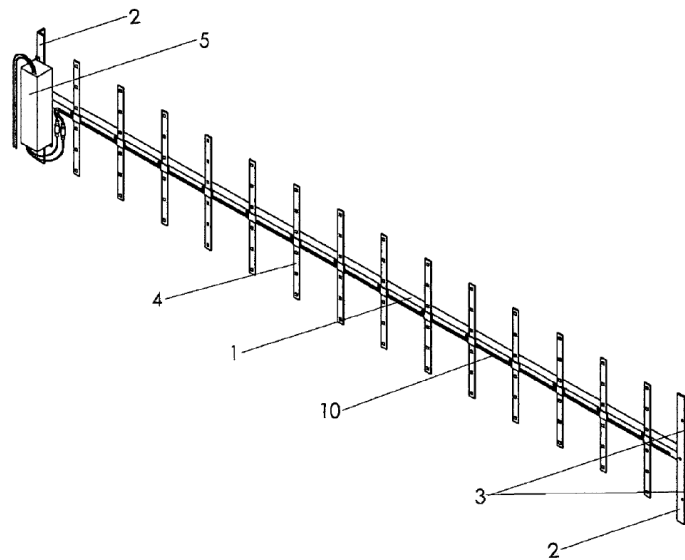


FIG. 1

Figure 1 shows an “assembly typifying an embodiment of the invention tailored to replace two single pin base fluorescent tubes with LED lighting.” *Id.* at 3:48–50. Two short lengths of extruded aluminum angle 2 are attached to the ends frame member 1 “using a single fastener such as a pop rivet for each.” *Id.* at 3:50–53. A single pin base fluorescent tube adapter 3 is pressed into short length of extruded aluminum angle 2. *Id.* at 3:53–56. “[A]dapter 3 is made of electrically insulating material to guard against the possibility that power has not yet been disconnected from the fluorescent ballast.” *Id.* at 3:59–62. “The entire assembly is pressed into the two sets of fluorescent tube receptacles simultaneously in a manner similar to which the fluorescent tubes are installed” in order to mechanically secure the assembly to the fixture. *Id.* at 3:56–59.

An array of LED modules 4 are affixed to frame member 1, each of which “are manufactured with a power cord 10 daisy-chaining them together.” *Id.* at 4:13–15. Commercially-available switching power supply 5, attached to frame member 1, attaches to one of the two power

cords of the nearest LED module and is also attached to the AC power line that formerly powered the fluorescent ballast. *Id.* at 4:15–19.

3. *Motivation to Combine Huang and Zimmerman*

Petitioner contends that Huang discloses an LED lamp tube with end caps and pins that engage connectors of a fluorescent bulb holder, but “does not expressly disclose its end caps or pins comprise electrically insulative material.” *Id.* (citing Ex. 1003 ¶¶ 73–75; Ex. 1005, 2:18–26, 2:38–46, Figs. 1, 2). Petitioner further contends that “Zimmerman explicitly discloses single-pin and bi-pin adapters (3, 9) comprising electrically-insulating material,” and that “[l]ike Huang’s end caps and pins, Zimmerman’s adapters are used to mount the LED assembly to preexisting receptacles and ‘mechanically secure’ the LED assembly to the lighting fixture.” *Id.* at 23–24 (citing Ex. 1003 ¶ 77; Ex. 1007, 3:35–38, 3:59–65).

According to Petitioner, “[i]t would have been obvious to make Huang’s end caps and pins out of electrically-insulating material, as taught by Zimmerman, to make the lamp tube safer by reducing the likelihood of exposure to electrical current” and to “lower manufacturing costs over using electrically conductive materials.” Pet. 24 (citing Ex. 1003 ¶¶ 79–80). Petitioner also contends that such a modification “is nothing more than combining known elements (Zimmerman’s electrically-insulating material and Huang’s end caps and pins) according to known methods (the construction taught by Huang and Zimmerman) to yield predictable results (safer, cheaper end caps and pins).” *Id.* (citing Ex. 1003 ¶ 81). Petitioner further contends that the proposed modification “is also nothing more than the use of a known technique (making components out of electrically-insulating material as taught by Zimmerman) to improve a similar device

(Huang’s lamp tube) in the same way to yield predictable results (safer, cheaper end caps and pins).” *Id.* at 24–25 (citing Ex. 1003 ¶ 82).

Patent Owner responds that Huang does not “*replace* fluorescent tubes, but relied on the same tube configuration with internal circuit boards 2 positioned inside tube 1,” while Zimmerman “was explicitly for the purpose of ‘*supplant[ing]* fluorescent tubes.’” Prelim. Resp. 34–35. Therefore, Patent Owner argues, Huang and Zimmerman are “directed to irreconcilable teachings, or at least disclosures that teach away from each other.” *Id.* at 36. According to Patent Owner, “Huang relies on the very tube structure Zimmerman criticizes and replaces, and Zimmerman does not even reference, let alone need, ‘end caps.’” *Id.* Patent Owner also argues that “[i]t would simply not be possible to combine a tube-type structure having end caps (Huang) with a structure explicitly for the purpose of replacing those tube-type arrangements and which has no mention of having or needing end caps (Zimmerman).” *Id.* at 39.

As an initial matter, we note that an obviousness analysis does not require bodily incorporation of one reference into another. *Allied Erecting & Dismantling Co. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016) (“[I]t is not necessary that [the cited references] be physically combinable to render obvious [the challenged patent]. The test for obviousness is not whether the features of the secondary reference may be bodily incorporated into the structure of the primary reference. . . .” (internal quotations omitted)). Rather, the test for obviousness is “whether ‘a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention.’” *Id.* Here, as we understand it, Petitioner argues that a person of ordinary skill in the art would have been motivated to make Huang’s end caps out of electrically insulative material

based on Zimmerman’s teaching of adapters made of electrically insulating material, not to use Zimmerman’s electrically-insulating adapters in place of Huang’s end caps. *See* Pet. 23–24, 29; Ex. 1003 ¶¶ 76–83, 93–94.

We also disagree, on this record, that Huang and Zimmerman are “directed to irreconcilable teachings, or at least teach away from each other,” as Patent Owner contends. Prelim. Resp. 36. Both Huang and Zimmerman relate to providing LED lamps that are connectable to conventional fluorescent bulb holders and substitute for the fluorescent bulbs. *See* Ex. 1005, 1:40–43; Ex. 1007, 2:46–48. That Huang teaches placing the LED lamps in a tube and Zimmerman teaches attaching the LED lamps to a frame structure is insufficient, by itself, to conclude that Zimmerman teaches away from Petitioner’s proposed modification of Huang. *See In re Beattie*, 974 F.2d 1309, 1312 (Fed. Cir. 1992).

Patent Owner additionally argues that “Petitioner and Dr. Coleman start with the result of the ’835 Patent and attendant described and recognized benefits and then work backwards to piece together disparate prior art (Huang’s tube-type configuration with end caps and Zimmerman’s tube-replacing structure without mention of end caps) in an effort to show” that the claim elements “were generally known and could have been combined.” Prelim. Resp. 41. Patent Owner argues that “none of the prior art references themselves were focused on these problems and their teachings are not compatible.” *Id.* As set forth above, however, we are not persuaded that the teachings of Huang and Zimmerman are incompatible based on the current record. Moreover, the motivation to combine references need not derive from the same problem identified in the patent, as any articulated reason to combine the prior art that is supported by sufficient factual underpinnings may be used in an obviousness argument. *See KSR*

Int'l Co. v. Teleflex, Inc., 550 U.S. 398, 420 (2007) (holding it was error to “assum[e] that a person of ordinary skill attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem”); *In re Beattie*, 974 F.2d at 1312 (“As long as some motivation or suggestion to combine the references is provided by the prior art taken as a whole, the law does not require that the references be combined for the reasons contemplated by the inventor.”).

Based on our review of the record, we are persuaded that Petitioner provides sufficient reasoning with rational underpinning to support a motivation to combine the teachings of Huang and Zimmerman as proposed. *See* Pet. 23–25; Ex. 1003 ¶¶ 76–83. Specifically, Petitioner sufficiently establishes, for purposes of institution, that a person of ordinary skill in the art would have had reason to modify Huang’s end caps to contain electrically-insulative material in light of Zimmerman’s teaching of fluorescent tube adapters made of electrically insulating material, in order “to make the lamp tube safer by reducing the likelihood of exposure to electrical current,” and “lower manufacturing costs over using electrically conductive materials.” *Id.* at 24 (citing Ex. 1003 ¶ 80). This determination is preliminary in nature and based on the record as this stage of the proceeding. We invite the parties to develop these arguments further at trial, to the extent permitted under our rules. In particular, we invite the parties to address Patent Owner’s assertion that person of ordinary skill in the art would not have had a reasonable expectation of success of achieving the claimed invention by combining the disclosures of Huang and Zimmerman as Petitioner proposes.

4. *Claims 1, 8–10, 13, 15–17, and 19*

Petitioner asserts, with supporting testimony from Dr. Coleman, that the combined teachings of Huang and Zimmerman disclose all the limitations claims 1, 8–10, 13, 15–17, and 19. For example, with respect to independent claim 1, Petitioner contends that Huang and Zimmerman disclose “an elongate support member for supporting a plurality of electric lamp units, said elongate support member having opposite end portions” (Huang’s circuit board 2, which has opposite end portions, supports LEDs 21), “one and only one end cap at each of said opposite end portions of said elongate support member” (Huang’s lamp tube 1 includes one end cap 11 at each end of the circuit board), and “said mechanical coupling element comprises electrically insulative material and does not retain any electrical conductors along or through said mechanical coupling element for powering the plurality of electric lamp units” (Huang’s end cap 11 and pins 111 modified in view of Zimmerman’s teaching of fluorescent bulb adapters made of electrically insulating material do not retain electrical conductors for powering the LEDs). Pet. 26–27 (citing Ex. 1005, 2:18–21, 2:28–30, Fig. 2; Ex. 1003 ¶¶ 85–86), 29–31 (citing Ex. 1005, 2:18–26, 2:38–46, 3:49–83, Figs. 1, 2, 3; Ex. 1003 ¶¶ 93–94). Petitioner makes similar arguments with respect to the comparable limitations in independent claims 13 and 19. *See id.* at 33–37 (claim 13), 40–43 (claim 19). Petitioner also states that it “is not aware of any secondary considerations at this time and submits that any potential secondary considerations would be insufficient to overcome the strong *prima facie* case of obviousness.” *Id.* at 113.

Patent Owner responds that Petitioner “egregiously misrepresents its knowledge of the existence of secondary considerations of non-obviousness.” Prelim. Resp. 49. In particular, Patent Owner asserts that in

February 2021 “Patent Owner at Petitioner’s request provided Petitioner with copies of two settlement/license agreements directed to the ’835 Patent,” and “[f]or Petitioner to represent to the Board that it is ‘not aware of any secondary considerations’ when it asked for and received these agreements is egregious and warrants denial in accordance with the Board’s past precedent.” *Id.* at 49–50. As set forth above with respect to our evaluation of the *Fintiv* factors, we are not persuaded on this record that Petitioner’s failure to address these agreements warrants denying the Petition. *See* Section II.A.6. Furthermore, the issue of objective indicia of non-obviousness is highly fact-specific. At this stage of the proceeding, the record regarding any such objective indicia is incomplete. For example, it does not appear that the two settlement/license agreements to which Patent Owner refers are in the record of this proceeding. Our final decision will consider the parties’ full record of any objective indicia evidence developed during trial as part of our obviousness analysis.

Having reviewed arguments in the Petition and Preliminary Response, as well as the evidence of record, we are persuaded that Petitioner’s discussions of the particular structures in Huang and Zimmerman, and the explanations in the Petition and the Coleman Declaration, are sufficient to establish a reasonable likelihood that the subject matter of independent claims 1, 13, and 19 would have been obvious over the combined teachings of Huang and Zimmerman. We also considered the parties’ arguments and evidence with respect to claims 8–10 (which depend, directly or indirectly, from claim 1) and 15–17 (which depend, directly or indirectly, from claim 13), and are persuaded, on the current record, that Petitioner has established a reasonable likelihood that it would prevail as to those claims as well.

F. Remaining Grounds Based on Huang

Petitioner contends that the subject matter of (1) claims 2, 3, 6, 7, and 11 would have been obvious over the combined teachings of Huang, Zimmerman, and Villard; (2) claims 4 and 5 would have been obvious over the combined teachings of Huang, Zimmerman, Villard, and Hoover; (3) claims 2, 6, 7, and 11 would have been obvious over the combined teachings of Huang, Zimmerman, and Timmermans; (4) claims 4 and 5 would have been obvious over the combined teachings of Huang, Zimmerman, Timmermans, and Hoover; (5) claim 8 would have been obvious over the combined teachings of Huang, Zimmerman, and Cummings; (6) claim 12 would have been obvious over the combined teachings of Huang, Zimmerman, Gefri, and Shan; (7) claim 14 would have been obvious over the combined teachings of Huang, Zimmerman, and Nall; and (8) claims 18 and 20 would have been obvious over the combined teachings of Huang, Zimmerman, and Reed. Pet. 43–72. Patent Owner does not offer any arguments addressing these grounds beyond its arguments regarding the combination of Huang and Zimmerman discussed above. *See* Prelim. Resp. 34–43. Having determined that Petitioner establishes a reasonable likelihood of showing that at least one of the challenged claims is unpatentable, we exercise our discretion and institute an *inter partes* review based on these grounds as well. *See Guidance of the Impact of SAS on AIA Trial Proceedings* (April 26, 2018) (explaining that “the PTAB will institute as to all claims or none” and “if the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition”).

G. Grounds Based on Withers

Petitioner contends that the subject matter of (1) claims 1, 8–10, 12, 13, 15–17, and 19 would have been obvious over the combined teachings of Withers, Hoover, and Zimmerman; (2) claims 2–7 and 11 would have been obvious over the combined teachings of Withers, Hoover, Zimmerman, and Villard; (3) claim 8 would have been obvious over the combined teachings of Withers, Hoover, Zimmerman, and Cummings; (4) claim 12 would have been obvious over the combined teachings of Withers, Hoover, Zimmerman, and Shan; (5) claim 14 would have been obvious over the combined teachings of Withers, Hoover, Zimmerman, and Nall; and (6) claims 18 and 20 would have been obvious over the combined teachings of Withers, Hoover, Zimmerman, and Reed. Pet. 73–113. Having determined that Petitioner establishes a reasonable likelihood of showing that at least one of the challenged claims is unpatentable as set forth above, we exercise our discretion and institute an *inter partes* review based on these grounds as well. *See Guidance of the Impact of SAS on AIA Trial Proceedings* (explaining that “the PTAB will institute as to all claims or none” and “if the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition”). We provide the following comments in response to the parties’ arguments and evidence with respect to these grounds.

Withers is directed to LED lighting tubes configured to replace fluorescent lighting tubes in a fluorescent tube fixture. Ex. 1006 ¶ 6. Patent Owner argues that Withers describes a “preferred embodiment having a light tube body 10 with end caps 16, 18 positioned on each end of tube body 10 wherein the end caps 16, 18 contain electrodes for connecting to the light fixture.” Prelim. Resp. 43 (citing Ex. 1006, Fig. 2). Patent Owner argues, and Petitioner admits, that “Withers does not expressly disclose its end caps

or pins comprise electrically insulative material.” *Id.* at 44 (quoting Pet. 77). Petitioner contends, as it did with respect to the combination of Huang and Zimmerman, that “[i]t would have been obvious to make Withers’ end caps and pins out of electrically-insulating material, as taught by Zimmerman, to make the lamp safer by reducing the likelihood of exposure to electrical current.” Pet. 78 (citing Ex. 1003 ¶ 246; Ex. 1007, 3:60–62). Patent Owner responds that “Withers explicitly requires that end caps 16, 18 contain electrodes 20 which are, under any reasonable definition, electrically conductive material” and “were explicitly for the purpose of conducting electricity.” Prelim. Resp. 45–46 (citing Ex. 2026) (emphases omitted). Patent Owner asserts that “Petitioner and Dr. Coleman do not even attempt to explain how or why a” person of ordinary skill in the art would be motivated to convert an electrode “into the exact opposite insulative material as discussed in Zimmerman.” *Id.* at 46.

Withers, however, teaches that the electrode pins in its end caps are electrically non-active and are “merely there for physically connecting the LED lighting tube 10 with the fluorescent light fixture.” Ex. 1003 ¶¶ 6, 22. Additionally, Dr. Coleman’s testimony, which is unrebutted at this stage of the proceeding, reasonably supports Petitioner’s contention that a person of ordinary skill in the art would have been motivated to modify Withers’ end caps with electrically-insulating material as taught by Zimmerman. Ex. 1003 ¶¶ 243–249. Although Patent Owner’s arguments challenge this element of Petitioner’s analysis, we do not agree, based on the current record and for purposes of institution, that Petitioner’s arguments regarding the combination of Withers and Zimmerman are unsupported.

Patent Owner further argues that “[t]he inclusion of Hoover in Grounds 10–15 further exacerbates the Petition’s failings” because Hoover

“has nothing whatsoever to do with the general subject of lighting or LED technology at focus in the ’835 Patent (or, in different forms, Withers and Zimmerman).” Prelim. Resp. 47. Petitioner contends that Hoover, “which relates generally to levels and more particularly to a level having an improved construction” (Ex. 1009, 1:5–6), “is analogous art to the ’835 patent because it is reasonably pertinent to a problem faced by the inventors of the ’835 patent.” Pet. 12 (citing Ex. 1003 ¶¶ 53–55; Ex. 1009, 2:8–13, 3:1–2, 3:14–27, Fig. 2). In particular, Petitioner contends that because “elongate support members and end caps are mechanical elements, one skilled in the art ‘would have consulted the mechanical arts’ for ways to attach an end cap to the end of an elongate support member having an I-beam cross-section.” *Id.* (citing Ex. 1003 ¶¶ 56–57). In that regard, Dr. Coleman testifies that “the problem faced by the inventor of the ’835 patent was how to attach an end cap to an end of an elongate support member having an I-beam cross-section.” Ex. 1003 ¶ 56 (citing Ex. 1001, Figs. 10, 12, 19, 21B, 4:61–5:17, 6:4–18).

Based on current record, we find that Patent Owner’s arguments regarding Hoover have merit. Two separate tests define the scope of analogous art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor’s endeavor, whether the reference is still reasonably pertinent to the particular problem with which the inventor is involved. *Circuit Check Inc. v. QXQ Inc.*, 795 F.3d 1331, 1335 (Fed. Cir. 2015). In order for a reference to be “reasonably pertinent” to the problem, it must “logically . . . have commended itself to an inventor’s attention in considering his problem.” *In re Icon Health & Fitness, Inc.*, 496 F.3d 1374, 1379–80 (Fed. Cir. 2007); *see also KSR*, 550 U.S. at 417 (“When a work is

available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one.”). The scope of analogous art is to be construed broadly. *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1238 (Fed. Cir. 2010). As noted above, Dr. Coleman testifies that the problem faced by the inventor “was how to attach an end cap to an end of an elongate support member having an I-beam cross-section,” at least raising the issue of whether Hoover is reasonably pertinent to the particular problem with which the inventor is involved. Of course, even if we assume that Hoover is reasonably pertinent to the particular problem with which the inventor is involved, Petitioner must still establish that it would have been obvious for a person of ordinary skill in the art to select Hoover and combine it with Withers as proposed.

We invite the parties to develop these arguments further at trial, to the extent permitted under our rules.

III. CONCLUSION

Based on the arguments in the Petition, Preliminary Response, Reply, and Sur-Reply, and the evidence of record, we determine that Petitioner establishes a reasonable likelihood that will prevail on its challenge to at least one claim of the '835 patent. Additionally, we decline to exercise our discretion under 35 U.S.C. §§ 314(a) or 325(d) to deny institution. Accordingly, we institute an *inter partes* review of all challenged claims on all the grounds presented in the Petition.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that an *inter partes* review is instituted with respect to the grounds asserted in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which shall commence on the entry date of this Decision.

For PETITIONER:

David Kim
STINSON LLP
david.kim@stinson.com

For PATENT OWNER:

Wasif Qureshi
Blake Dietrich
JACKSON WALKER LLP
wqureshi@jw.com
bdietrich@jw.com