

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TIANMA MICROELECTRONICS CO. LTD.,
Petitioner,

v.

JAPAN DISPLAY INC. and PANASONIC LIQUID
CRYSTAL DISPLAY CO., LTD.,
Patent Owner.

IPR2021-01028
Patent 9,793,299 B2

Before JO-ANNE M. KOKOSKI, KRISTINA M. KALAN, and
ELIZABETH M. ROESEL, *Administrative Patent Judges*.

KOKOSKI, *Administrative Patent Judge*.

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

I. INTRODUCTION

Tianma Microelectronics Co. Ltd. (“Petitioner”) filed a Petition to institute an *inter partes* review of claims 1–11, 15, and 16 (the “challenged claims”) of U.S. Patent No. 9,793,299 B2 (“the ’299 patent,” Ex. 1001). Paper 2 (“Pet.”). Japan Display Inc. and Panasonic Liquid Crystal Display Co., Ltd. (collectively, “Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). With Board authorization, Petitioner filed a Reply to the Preliminary Response (“Reply,” Paper 8), and Patent Owner filed a Sur-reply to Petitioner’s Reply (“Sur-reply,” Paper 10).

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 (2021). 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 one claim of the ’299 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 1–11, 15, and 16 of the ’299 patent.

A. Real Parties-in-Interest

Each party identifies itself as the real party-in-interest. Pet. 72; Paper 6, 1.

B. Related Proceedings

The parties indicate that the ’299 patent is asserted in *Japan Display Inc. and Panasonic Crystal Display Co., Ltd. v. Tianma Microelectronics*

Co. Ltd., No. 2:20-cv-00283 (E.D. Tex.) (the “District Court Action”).
Pet. 72; Paper 6, 1.

C. The '299 Patent

The '299 patent, titled “Display Device and Hand-Held Electronic Device,” relates to a liquid crystal display, and, in particular, “is concerned with a technique applicable effectively to a liquid crystal display (module) used in a hand-held electronic device such as a mobile telephone terminal.” Ex. 1001, code (54), 1:30–34. The '299 patent explains that, “[i]n the liquid crystal display, when the thickness of the glass substrate used in the [thin film transistor (“TFT”)] substrate or the counter substrate is reduced by polishing in order to reduce the thickness of the liquid crystal display panel,” the strength of both the glass substrate and the liquid crystal display panel is deteriorated, and “poses the problem that it is difficult to attain both thickness reduction and ensuring of a sufficient strength.” *Id.* at 2:8–17. The '299 patent further explains that using a plastic substrate instead of a glass substrate “poses the problem that the heat resistance and solvent resistance (chemicals resistance) of the plastic substrate are low in comparison with the glass substrate,” handling the plastic substrate “in the step of forming TFT onto the glass substrate” is difficult, and unevenness in the display easily occurs when a glass substrate is used as the TFT substrate and a plastic substrate is used as the counter substrate “because the substrates differ in the amount of deformation caused by changes of environmental conditions such as temperature and humidity.” *Id.* at 2:18–29. The '299 patent, therefore, seeks “to provide a technique able to attain both thickness reduction of a liquid crystal display panel and ensuring of a sufficient strength of the panel,” and “to reduce the thickness of a hand-held electronic device such as a liquid crystal display (module).” *Id.* at 2:30–36.

Figure 2 of the '299 patent is reproduced below.

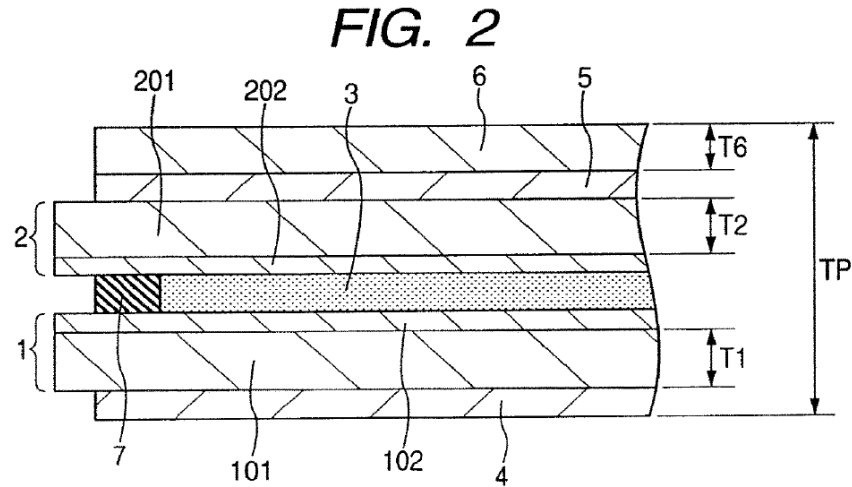


Figure 2 is a sectional view of a configuration of a liquid crystal display panel according to one embodiment described in the '299 patent. *Id.* at 8:66–67. The liquid crystal display panel includes TFT substrate 1, counter substrate 2, and liquid crystal material 3, polarizing plates 4, 5, and resin film 6. *Id.* at 10:14–21. Annular sealing member 7 bonds TFT substrate 1 to counter substrate 2, and liquid crystal material 3 “is sealed and held within the space enclosed by the TFT substrate 1, counter substrate 2 and sealing member 7.” *Id.* at 10:23–27. TFT substrate 1 includes glass substrate 101 and multi-thin film layer 102, which “is a laminate of plural insulating layers, conductive layer, semiconductor layer and the like.” *Id.* at 10:42–46. Counter substrate 2 includes glass substrate 201 and multi-thin film layer 202, which “is a laminate of plural insulating layers and conductive layer, forming a color filter for example.” *Id.* at 10:50–54. A pressure-sensitive adhesive affixes lower polarizing plate 4 to glass substrate 101, upper polarizing plate 5 to glass substrate 201, and resin film 6 to upper polarizing plate 5. *Id.* at 11:3–8, 11:29–31.

The '299 patent teaches that “resin film 6 is a film member disposed on the most front side viewed from the observer side,” and “it is preferable that a film with a high light transmittance, especially a colorless, transparent film be used as the resin film 6” that preferably has “a thickness, T6, of 0.2 mm or more and 1.0 mm or less.” *Id.* at 11:24–34. “If the thickness T6 of the resin film 6 is 0.2 mm or more, a sufficient strength of the liquid crystal panel can be ensured” even if glass substrate 101 and glass substrate 201 “are each made as thin as 0.5 mm or less.” *Id.* at 11:34–39. Therefore, according to the '299 patent, sufficient strength in the liquid crystal display panel “can be ensured even if the total panel thickness, TP, is 2 mm or less.” *Id.* at 11:39–41.

D. Illustrative Claim

Petitioner challenges claims 1–11, 15, and 16 of the '299 patent. Pet. 2–3. Claims 1 and 6 are independent. Claim 1 is illustrative of the claimed subject matter, and is reproduced below.

1. A display device comprising display area and used in a hand-held electronic device comprising:

- [a] a TFT substrate;
- [b] a counter substrate;
- [c] a multi-thin layer film;
- [d] a liquid crystal layer;
- [e] a seal member;
- [f] a polarizing plate;
- [g] an adhesive member;
- [h] a protective member;
- [i] wherein the multi-thin film layer disposed on the TFT substrate,
- [j] wherein the liquid crystal layer disposed on the multi-thin layer;

- [k] wherein the seal member surrounds the liquid crystal layer;
- [l] wherein the counter substrate is disposed between the TFT substrate and the polarizing plate;
- [m] wherein the polarizing plate is a separate member from the protective member and disposed between the counter substrate and the protective member;
- [n] wherein the adhesive member overlaps with the display area in a plan view, and is between the protective member and the polarizing plate; and
- [o] wherein the protective member is a protective cover of the hand-held electronic device,
- [p] wherein the protective member overlaps with the sealing member in a plan view, and
- [q] wherein a thickness of the protective member is at least 0.2 mm and no greater than 1.0 mm.

Ex. 1001, 22:62–23:24 (bracketed material added).

E. References Relied Upon

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

Reference	Date	Exhibit No.
US Patent App. Pub. No. 2005/0158665 A1 (“Maekawa”)	July 21, 2005	1005
US Patent App. Pub. No. 2004/0239641 A1 (“Takahata”)	Dec. 2, 2004	1006
US Patent App. Pub. No. 2005/0099402 A1 (“Nakanishi”)	May 12, 2005	1007
JP Patent App. Pub. No. P2004– 272059A (“Nagano”)	Sept. 30, 2004	1008

F. Asserted Grounds

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

Claims Challenged	35 U.S.C. §	References
1, 3–6, 8–11	103	Maekawa, Takahata
2, 7	103	Maekawa, Takahata, Nakanishi
15, 16	103	Maekawa, Takahata, Nagano

Pet. 2–3. Petitioner relies on the Declaration of Richard Flasck (“Flasck Declaration,” Ex. 1002) in support of its contentions. Patent Owner submits the Declaration of Thomas L. Credelle (“Credelle Declaration,” Ex. 2010) in support of its Preliminary Response.

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. Prelim. Resp. 1–16; Sur-reply 1–6. 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. The parties indicate that Petitioner has not requested a stay of the District Court Action. Pet. 7; Prelim. Resp. 4. We decline to speculate on how the court in the

related proceeding would rule on a stay, if one were requested. *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). Thus, we find this factor to be neutral.

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 February 7, 2022. Pet. 8; Prelim. Resp. 7; Ex. 2001. If trial is instituted, the statutory deadline for issuance of a final written decision in this proceeding would be in December 2022. 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 ten months after the start of the trial. We determine that this factor weighs 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*

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.

Patent Owner contends that “[b]y the time an institution decision issues in this proceeding, fact and expert discovery will be complete; expert reports and dispositive motions will have been filed; and the parties will have filed their motions in limine and be preparing for trial.” Prelim. Resp. 9 (citing Ex. 2001). Therefore, Patent Owner contends, the District Court Action “is far along enough that the parties and the Court have invested significant resources in this case.” *Id.* We recognize that much work has been done by the parties and the District Court.

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 contends that “Petitioner waited nine months from the filing of the complaint to file this Petition,” and this “unexplained delay . . . also weighs in favor of the Board exercising discretion to deny institution.” Prelim. Resp. 10. As Petitioner notes, however, Patent Owner filed its infringement contentions in the District Court Action on January 6, 2021, and Petitioner filed this Petition five months later on June 8, 2021. Pet. 9–10; *see also* Ex. 1020 (infringement contentions served on January 6, 2021); Paper 3, 1 (according the Petition a filing date of June 8, 2021). Petitioner asserts that it “moved with speed and diligence in bringing the present—and six related IPRs—approximately five months after Patent Owner served its infringement contentions,” because, even after Patent

Owner filed its infringement contentions, “Patent Owner still asserted 135 claims from 15 patents against more than 2,400 accused products, imposing a vastly greater burden on Petitioner to assess the dispute and evaluate which patents to request IPR.” Reply 2–3.

We find that Petitioner’s diligence in filing the Petition five months after receiving Patent Owner’s infringement contentions in the District Court Action is a countervailing consideration to the amount of work done by the parties in the District Court Action, considering that Patent Owner’s infringement contentions included 135 claims from 15 patents. *See 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*.”); *see also Samsung Electronics, Ltd. v. Acorn Semi, LLC*, IPR2020-01183, Paper 17 at 40 (PTAB Feb. 10, 2021) (“[W]e also find, as a countervailing consideration, that Petitioner acted diligently in filing this and the other IPRs” less than four months after Patent Owner identified “the full set of claims being asserted in the District Court.”). For these reasons, we determine that this factor is neutral.

4. *Factor 4: Overlap of Issues*

Patent Owner argues that “Petitioner challenges the same claims and relies on the same references in its Invalidity Contentions [in the District Court Action] as in the Petition” and that Petitioner was subsequently allowed to amend its invalidity contentions “to include references ‘raised in *Inter Partes* Review (IPR) petitions that Tianma Microelectronics filed in June.’” Prelim. Resp. 11–12 (citing Ex. 2002, Chart D-1; Ex. 2007, 1; Ex. 2012). Patent Owner argues that any stipulation that Petitioner offers “is a hollow promise since expert reports are due on October 1, 2021, prior to

the institution deadline for this Petition.” *Id.* at 13 (citing Ex. 2001).

According to Patent Owner, “[b]ecause there is complete overlap of issues raised in the Petition and the district court case, this factor weighs heavily in favor of denial.” *Id.* at 14.

In the Petition, Petitioner states that it “stipulates that, if this IPR is instituted, it will not pursue in the related district court litigation any ground that it raised or reasonably could have raised in this Petition.” Pet. 11.

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. We also note that Patent Owner recently narrowed the claims of the ’299 patent that it is asserting in the District Court action to include only claims 6, 7, and 16. Ex. 2026, 1; *see also* Ex. 2025, 2–3 (ordering Patent Owner to narrow the number of patents and claims asserted in the District Action). Because the District Court Action will not address all of the claims challenged in this proceeding, and Petitioner agrees to be bound by a stipulation substantively similar to that in *Sotera*, 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. 72; Prelim. Resp. 14. Accordingly, we determine that this factor weighs in favor of exercising discretion to deny institution.

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

Patent Owner argues that “the merits of this Petition are not strong” because “Petitioner has failed to show how the combination of *Maekawa* with *Takahata* renders obvious claims 1, 3–6, and 8–11.” Prelim. Resp. 14. We have reviewed Petitioner’s unpatentability arguments and Patent Owner’s responses thereto, and 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”). 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” (*Fintiv* Order, 6), 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 prior art relied on by Petitioner was previously considered during prosecution of the ’299 patent. Prelim. Resp. 16–27.

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*¹ 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

¹ *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph).

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. Analysis

Patent Owner contends that “*Maekawa*, the primary reference in the present *inter partes* review petition, was also the primary reference used against independent claims 1 and 6, and was the sole reference used against all of dependent claims 3–6 and 8–11 during prosecution of the ’299 patent.” Prelim. Resp. 17 (citing Ex. 1004). Patent Owner argues that “Petitioner applies Takahata as a secondary reference for claims 1 and 6 whereas the Examiner applied *Hashimoto* (U.S. Pat. Publ. No. 2004/02479187) as the secondary reference during prosecution,” but “Petitioner has not pointed to any substantive differences between *Takahata* and *Hashimoto* as a basis for unpatentability, and, therefore, little weight can be given to the fact that these are different references.” *Id.* at 17–18 (citing Ex. 1004; *Becton, Dickinson*, Paper 8 at 21). Patent Owner also argues that Petitioner relies on Takahata as disclosing an adhesive member, for which the Examiner relied on Hashimoto during prosecution, and “has not pointed to any substantive differences between the obviousness arguments presented in the Petition compared with the obviousness argument presented during prosecution.” *Id.* at 19.

Petitioner contends that, during prosecution, the Examiner found “*Maekawa* and *Hashimoto* disclosed all features of independent claims 1

and 6 except for the thickness requirement for the protective member.”

Pet. 14 (citing Ex. 1004, 34–37, 39–41). Petitioner contends that the Petition “demonstrates that the allegedly missing element of the protective member thickness requirement was also in the prior art, as evidenced in Takahata (Ex. 1006), a reference the Examiner never cited or applied during prosecution.” *Id.* (citing Ex. 1004; Ex. 1001). Petitioner further contends that although the Petition relies on Maekawa “for the majority of claim features the Examiner” relied upon, it

presents combinations with other references, as supported by the declaration testimony of Mr. Flasck, that cure the alleged deficiencies in Maekawa, including the thickness requirements of the independent claims as well as features of claims 15 and 16 that the Examiner also found missing from Maekawa and Hashimoto. Takahata is also relied upon to evidence the well-known use of an adhesive member. Such combinations were never considered by the Examiner and are not cumulative to those references the Examiner did consider during prosecution.

Id. at 14–15.

Although Maekawa was considered by the Office during prosecution and is relied upon by Petitioner as the primary reference in the Petition (*Advanced Bionics*, Paper 6 at 8), there is not complete overlap between the arguments made during examination and the manner in which Petitioner relies on Maekawa here (*id.*). Petitioner argues that Takahata, in combination with Maekawa, discloses “an adhesive member” and “wherein the thickness of the protective member is at least 0.2 mm and no greater than 1.0 mm.” Pet. 24–35, 44–49; Section II.E.3, *infra*. As Patent Owner recognizes, the Examiner allowed the claims because “[a] thickness of a protective member at least 0.2 mm and no greater 1.0 mm was not found in the prior art because rejection relied on a protective member as a hard coat.”

Prelim. Resp. 19–20 (quoting Ex. 1004, 2). Patent Owner does not contend that Petitioner’s arguments regarding how the combined teachings of Maekawa and Takahata disclose the thickness of the protective member were previously considered by the Office. *Id.*

Accordingly, although Petitioner’s contentions that the challenged claims would have been obvious over the combined teachings of Maekawa and Takahata includes some cumulative art and arguments (*Becton, Dickinson* Factor (a)), Petitioner’s contentions also include art and arguments that are not cumulative of those previously considered by the Office (*Becton, Dickinson* Factor (b)). Because Petitioner relies on Takahata with respect to a limitation that the Examiner determined was not found in the art, there are material differences between the asserted art here and the prior art involved during examination. Thus, overall, we find that substantially the same art and arguments were not previously presented. When considering the Petition as a whole, we find that it does not sufficiently implicate the concerns addressed by § 325(d) to warrant discretionary denial, and we decline to exercise our discretion to deny institution under § 325(d).

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 four-year undergraduate degree in electrical engineering or physics or a closely related field and four years of experience in the design and implementation of flat panel display devices or components thereof.” Pet. 6 (citing Ex. 1002 ¶ 41). Patent Owner’s declarant, Mr. Credelle, testifies that a person having ordinary skill in the art “would have had the equivalent of an undergraduate degree in electrical engineering, materials science, physics, or a related field and at least two years of work

experience (or a graduate degree) in LCD display technology.” Ex. 2010 ¶ 28. Mr. Credelle also states that, although he disagrees with Petitioner’s proposed level of ordinary skill in the art, his opinions “apply equally under either proposed level.” *Id.* ¶ 30.

We agree with the parties that a person of ordinary skill in the art would have had the equivalent of a four-year undergraduate degree in electrical engineering or a similar field, and experience in the field of flat panel displays or liquid crystal display technology, which appears to be consistent with the level of skill in the art at the time of the invention as reflected in the prior art in this proceeding. Our determination regarding Petitioner’s challenge does not turn on the differences between Petitioner’s and Patent Owner’s definitions, and we note that our conclusion would be the same under either definition.

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)).

Neither party proposes an explicit construction for any claim term. *See* Pet. 6; Prelim. Resp. For purposes of this Decision, based on the record before us, we determine that no claim term requires an explicit construction.

E. Obviousness over Maekawa and Takahata

Petitioner contends that claims 1, 3–6, and 8–11 would have been obvious over the combined teachings of Maekawa and Takahata. Pet. 17–62.

1. Overview of Maekawa

Maekawa discloses a method of manufacturing a semiconductor device. Ex. 1005, codes (54), (57), ¶¶ 2, 11. According to Maekawa, the semiconductor device can be, for example, a display device that includes a liquid crystal display device. *Id.* ¶¶ 25, 43.

Maekawa’s Figure 16 is reproduced below.

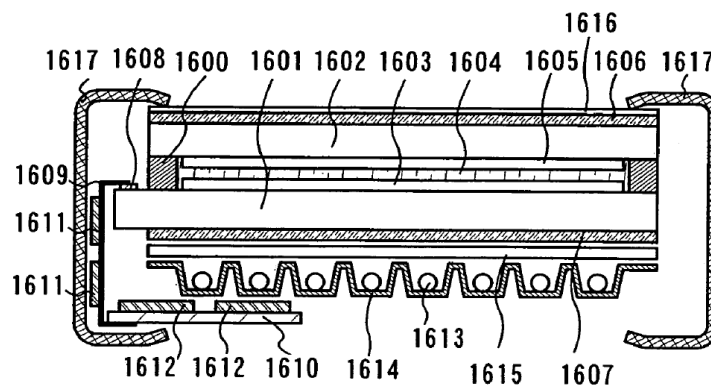


Fig. 16

Figure 16 “is a view showing a structure of a liquid crystal display module” described in Maekawa. *Id.* ¶ 67. Active matrix substrate 1601 and substrate 1602 are fixed with sealant 1600, with pixel portion 1603 and liquid crystal layer 1604 “interposed therebetween which form a display region.” *Id.*

¶ 297. “[C]olored layer 1605 is required in the case of performing a color

display.” *Id.* ¶ 298. Polarizers 1606 and 1607 are provided outside active matrix substrate 1601 and counter substrate 1602, and protective film 1616 is formed on the surface of polarizer 1606 “for alleviating external shocks.” *Id.* Connecting terminal 1608 provided on active matrix 1601 is connected to wiring substrate 1610 through flexible printed circuit (“FPC”) 1609, and pixel driver circuit 1611 is provided for the FPC and the connecting wiring. *Id.* ¶ 299. Wiring substrate 1610 is incorporated with external circuit 1612 “such as a control circuit and a power source circuit.” *Id.* Cold cathode tube 1613, reflector 1614, and optical film 1615 “are a backlight unit as a light source which projects light to a liquid crystal display panel,” and “[t]he liquid crystal panel, the light source, the wiring substrate, the FPC and the like are maintained and protected by a bezel 1617.” *Id.* ¶ 300.

2. Overview of Takahata

Takahata “relates to a high-durability touch panel which is free from occurrence of deterioration of its antireflection characteristics due to retardation changes even if left under a high-temperature environment for a long time” used “primarily for car navigation or the like.” Ex. 1006 ¶ 1.

Takahata’s Figure 2 is reproduced below.

Fig. 2

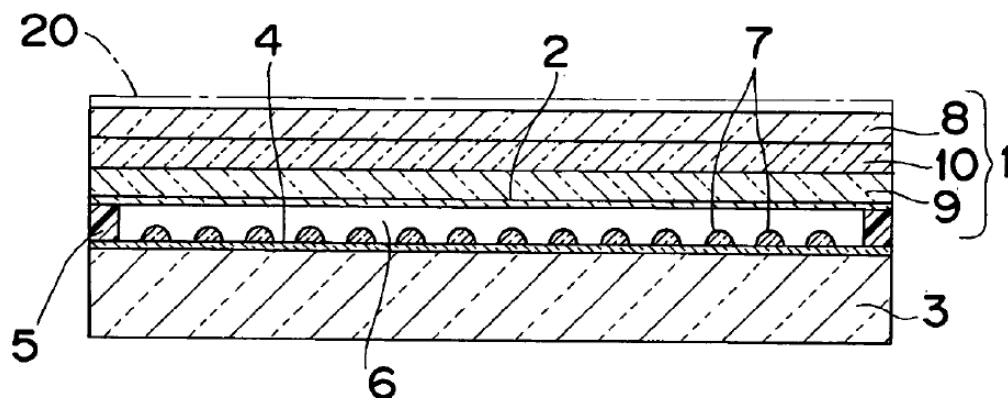


Figure 2 “is a sectional view showing a low-reflection touch panel having high durability” described by Takahata. *Id.* ¶ 21. The touch panel includes upper electrode plate 1, upper electrode 2, lower electrode plate 3, lower electrode 4, adhesive layer 5, air layer 6, spacers 7, heat-resistant transparent resin plate 8, quarter wave plate 9, and polarizing plate 10. *Id.* ¶ 30.

Takahata teaches that the touch panel is structured such that upper electrode plate 1 in which upper electrode 2 made of a transparent conductive film is provided on the lower surface, and lower electrode plate 3 in which lower electrode 4 made of transparent conductive film is provided on the upper surface, “are adhesively fixed only at their non-display area portions with the two electrodes 1 [*sic*, 2] and 3 opposed to each other via the air layer 6.” *Id.* ¶ 31.

Takahata teaches that heat-resistant transparent resin plate 8 as one constituent layer of the upper electrode plate 1, is bonded together with the quarter wave plate 9 and the polarizing plate 10 all over so as to almost fully suppress the thermal expansion of the quarter plate 9 and the polarizing plate 10 and to thereby maintain a stable state free from occurrence of waviness and strain under a high-temperature environment over 70° C such as in a vehicle with its windows closed under summer’s direct sunlight, or even under high-temperature, high-humidity environments with the humidity over 80% such as on rainy days, as with glass plates.

Id. ¶ 37. Takahata further teaches that “[i]n order to keep the quarter wave plate 9 and the polarizing plate 10 in a stable state free from occurrence of waviness or strain, the heat-resistant transparent resin plate 8 needs to be not less than 0.15 mm thick” because, “if the heat-resistant transparent resin plate 8 is less than 0.15 mm thick, the heat-resistant transparent resin plate 8 itself is not deformed due to heat, but cannot withstand the force with which the quarter wave plate 9 and the polarizing plate 10 tend to be deformed.”

Id. ¶ 41. Takahata further teaches that “[m]ore preferably, a heat-resistant transparent resin plate 8 having a thickness of not less than 0.2 mm is used.”
Id.

3. Analysis

Petitioner asserts, with supporting testimony from Mr. Flasck, that claims 1, 3–6, and 8–11 would have been obvious over the combined teachings of Maekawa and Takahata. Pet. 17–49. Petitioner contends that Maekawa discloses all of the limitations of independent claim 1 except elements 1[g], 1[n] and 1[q], which Petitioner contends Takahata discloses, as follows:

Preamble: “A display device comprising display area and used in a hand-held electronic device comprising:” (Pet. 17–19 (relying on Ex. 1005 ¶¶ 25–26, 43, 67, 257, 273, 296, 327–328, Fig. 16));

Element 1[a]: “a TFT substrate,” (Pet. 20–23 (relying on Ex. 1005 ¶¶ 307–309; Ex. 1002 ¶¶ 56–58));

Element 1[b]: “a counter substrate,” (*id.*);

Element 1[c]: “a multi-thin film layer,” (*id.*);

Element 1[d]: “a liquid crystal layer,” (Pet. 23 (relying on Ex. 1005 ¶¶ 79, 254–255, 297));

Element 1[e]: “a seal member,” (*id.*);

Element 1[f]: “a polarizing plate,” (Pet. 24 (relying on Ex. 1005 ¶¶ 298, 322, Fig. 30B));

Element 1[g]: “an adhesive member, and” (Pet. 26–35 (relying on Ex. 1006 ¶¶ 35–37, 45–48, 50, Fig. 2; Ex. 1002 ¶¶ 64–75));

Element 1[h]: “a protective member;” (Pet. 24–26 (relying on Ex. 1005 ¶¶ 298, 322, Fig. 30B; Ex. 1002 ¶ 63));

Element 1[i]: “wherein the multi-thin film layer disposed on the TFT substrate,” (Pet. 36 (relying on Ex. 1005 ¶¶ 59–61, 81, 147–148, 226–259, 297, 307–311, 327; Ex. 1002 ¶ 78));

Element 1[j]: “wherein the liquid crystal layer disposed on the multi-thin film layer,” (Pet. 36–37 (relying on Ex. 1005 ¶ 297));

Element 1[k]: “wherein the seal member surrounds the liquid crystal layer,” (Pet. 37–38 (relying on Ex. 1005 ¶¶ 79, 254–255, 297));

Element 1[l]: “wherein the counter substrate is disposed between the TFT substrate and the polarizing plate,” (Pet. 37–38 (relying on Ex. 1005 ¶¶ 297–298));

Element 1[m]: “wherein the polarizing plate is a separate member from the protective member and disposed between the counter substrate and the protective member,” (Pet. 39 (relying on Ex. 1005 ¶ 298));

Element 1[n]: “wherein the adhesive member overlaps with the display area in a plan view, and is between the protective member and the polarizing plate,” (Pet. 40–42 (relying on Ex. 1006 ¶¶ 35, 37, 45, 48; Ex. 1002 ¶¶ 89–90));

Element 1[o]: “wherein the protective member is a protective cover of the hand-held electronic device,” (Pet. 43 (relying on Ex. 1005 ¶¶ 298, 322, Fig. 30B; Ex. 1002 ¶ 92));

Element 1[p]: “wherein the protective member overlaps with the sealing member in a plan view, and” (Pet. 43–44 (relying on Ex. 1005 ¶¶ 297–298));

Element 1[q]: “wherein a thickness of the protective member is at least 0.2 mm and no greater than 1.0 mm.” (Pet. 44–49 (relying on Ex. 1006 ¶¶ 36, 41–42 47–48; Ex. 1002 ¶¶ 94–103)).

Petitioner contends Takahata teaches that quarter wave plate 9, polarizing plate 10, and heat-resistant resin plate 8 may be bonded together by an adhesive or by an optically isotropic transparent resin plate located between heat-resistant resin plate 8 and polarizing plate 10. Pet. 27–28 (citing Ex. 1006 ¶¶ 35, 37, 45; Ex. 1002 ¶¶ 67–68). Petitioner contends that a person having ordinary skill in the art would have been motivated to use an adhesive to bond Maekawa’s protective film 1616 (the claimed “protective member”) to Maekawa’s polarizer 1606 (the claimed “polarizing plate”) “to provide a durable display that ‘suppress[es] the thermal expansion’ of Maekawa’s polarizer, ‘maintain[s] a stable state free from occurrence of waviness and strain under a high temperature environment,’ and mitigates ‘the deterioration of [the polarizer’s] antireflection characteristics,’ as taught by Takahata.” *Id.* at 30 (quoting Ex. 1006 ¶¶ 7, 37; citing Ex. 1002 ¶ 70). Petitioner also contends that implementing Maekawa’s display device with an adhesive member would “eliminate the inevitable small air gap separation arising between the protective film and the polarizer when brought into close contact” (*id.* at 31 (citing Ex. 1011, 4:45–47, 5:43, 6:3–6, 6:28–39)), “prevent pockets of air from being trapped in Maekawa’s protective member and polarizer, which ‘can create mechanical stress when the display device is used at various elevations leading to cracking and other damage to the display’” (*id.* at 33 (quoting Ex. 1002 ¶ 74)), and “‘provide rigidity and stiffness’ to the display by ‘produc[ing] a monolithic sheet that is stronger than each of the individual layers taken alone’ with the adhesive ‘absorb[ing] geometric variations so as to form a singular composite structure with an overall geometry that is desirable’” (*id.* (quoting Ex. 1017, 16:20–33)).

Petitioner further contends that it would have been obvious to a person having ordinary skill in the art to implement Maekawa's protective film 1616

with a thickness of at least 0.2 mm and no greater than 0.8 mm to keep Maekawa's polarizer [1606] "in stable state free from occurrence of waviness or strain" and "withstand the force" with which the polarizer "tend[s] to be deformed" and "allow[] the input by pen or finger to be done adequately lightly even when incorporated as one constituent layer of the upper electrode plate 1 by virtue of its high flexibility as compared with glass plates," as taught by Takahata.

Pet. 45 (quoting Ex. 1005 ¶¶ 41–42; citing Ex. 1002 ¶ 97). Petitioner also contends that using a protective film of this thickness in Maekawa would "provide Maekawa's display with a more durable protective cover" and "allow application of a rolling manufacturing process, which, as Takahata teaches, 'facilitates defoaming process or the like during the bonding process.'" *Id.* at 45–46 (citing and quoting Ex. 1006 ¶¶ 42, 53; citing Ex. 1002 ¶ 98, 99). Petitioner contends that "Maekawa and Takahata are each analogous art to the '299 patent for at least the reason that each 'is from the same field of endeavor,' display devices, and in particular, LCD display devices." Pet. 34 (citing Ex. 1005 ¶¶ 25, 67, 296; Ex. 1006 ¶¶ 2–3, 47; Ex. 1001, 10:28, 11:18).

Patent Owner responds that Maekawa and Takahata are not analogous prior art to the '299 patent, and therefore cannot be combined as Petitioner proposes. Prelim. Resp. 27–31. In particular, Patent Owner argues that the field of endeavor of the '299 patent is LCD display devices, whereas Maekawa's field of endeavor is a manufacturing method for semiconductor devices and Takahata's field of endeavor is touch panels. *Id.* at 28 (citing Ex. 1001, 1:29–34; 0Ex. 1005 ¶ 2; Ex. 1006 ¶ 1). Patent Owner argues that

claim 1 of the '299 patent only encompasses hand-held electronic devices, not affixed electronic devices, and Takahata “specifically states that it is directed at touch panels ‘primarily for car navigation and the like’ that are affixed to a car’s dashboard.” *Id.* at 28–29 (citing Ex. 1001, 22:62–63; Ex. 1006 ¶ 1). According to Patent Owner, “concerns related to a touch screen for a car’s navigational system are not the same as for a hand-held device, and therefore the '299 patent is not from the same field of endeavor as Takahata.” *Id.* at 30.

Patent Owner further argues that Maekawa and Takahata solve different problems from those addressed by the '299 patent. Prelim. Resp. 30. Patent Owner argues that Maekawa “seeks to solve a manufacturing problem found in display devices,” and Takahata “seeks to solve the problem of creating a ‘high-durability touch panel’ which is resistant to high temperatures over 70° C.” *Id.* at 31 (citing Ex. 1005 ¶¶ 9–11, 50, 51; Ex. 1006 ¶¶ 1–5, 30). Patent Owner argues that these problems “are quite different from the problem of creating a thin and strong LCD panel and LCD display module described in the '299 patent.” *Id.* (citing Ex. 1001, 2:7–39, 5:24–43, 5:59–6:12).

A two-part test defines 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 Int’l*

Co. v. Teleflex, Inc., 550 U.S. 398, 417 (2007) (“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).

On this record, and in connection with the first part of the test to define the scope of analogous art, we agree with Petitioner that Maekawa and Takahata are from the same field of endeavor as the ’299 patent, namely, display devices, and more particularly, LCD display devices. *See, e.g.*, Ex. 1005 ¶¶ 25, 43, 67, Fig. 16; Ex. 1006 ¶¶ 2–3, 47. As to the second part of the test to define the scope of analogous art, even if we were to assume that Maekawa and Takahata are not in the same field of endeavor as the ’299 patent as Patent Owner contends, on the record before us we find Maekawa and Takahata to be reasonably pertinent to the particular problem with which the inventor is involved. The solution to the problem described in the ’299 patent is to provide a liquid crystal display panel with a resin film affixed to a polarizing plate, the resin film functioning “as a reinforcing member, whereby the strength of the liquid display panel is enhanced.” Ex. 1001, 5:23–32. Maekawa’s liquid crystal display device with a protective film formed on the surface of the polarizer “for alleviating external shocks” is reasonably pertinent to the particular problem with which the ’299 patent is involved, as is Takahata’s touch panel with a LCD display that bonds a heat-resistant transparent resin plate with a quarter wave plate and a polarizing plate “to maintain a stable state free from occurrence of waviness and strain under a high temperature environment.” Ex. 1005 ¶¶ 296, 298; Ex. 1006 ¶¶ 37, 41, 47. Accordingly, we find that, for purposes

of this Decision, the record establishes that Maekawa and Takahata are analogous art to the '299 patent.

Patent Owner also argues that a person of ordinary skill in the art would not have been motivated to implement Maekawa's display device with an adhesive member between protective film 1616 and polarizer 1606. Prelim. Resp. 34–36. In particular, Patent Owner argues that because Maekawa's polarizers 1606 and 1607 are provided on the outside of active matrix substrate 1601 and counter substrate 1602, they are not prone to thermal expansion in the same way as the polarizers and quarter wave plates described in Takahata. *Id.* at 35 (citing Ex. 1005 ¶ 298, Fig. 16; quoting Ex. 2010 ¶ 44). In that regard, Mr. Credelle testifies that, “in *Takahata*, the polarizers and quarter wave plates are located only on the upper electrode facing outwards, and are separated by an air gap (a thermal insulator) from the lower substrate” and, because “the touch panel is only supported at the periphery, any thermal loading on the front surface e.g., from sunlight, makes these outside layers vulnerable to heat warpage.” Ex. 2010 ¶ 44 (citing Ex. 1006, Figs. 1–3).

To support a showing of obviousness, there has to be an articulated reasoning with rational underpinning to support a motivation to combine prior art teachings, and the analysis should be explicit. *KSR*, 550 U.S. at 418. In addition to arguing that suppression of thermal expansion is one reason a person having ordinary skill in the art would have been motivated to use an adhesive member in Maekawa's display device, Petitioner contends that such a combination would also eliminate small air gaps, prevent pockets of air from being trapped that can create mechanical stresses leading to cracking and other damage to the display, and would provide rigidity and stiffness to the display. Pet. 31–34; *see* Ex. 1002 ¶¶ 72–75.

Although Patent Owner’s argument casts some doubt on Petitioner’s argument with respect to suppressing thermal expansion, we determine, based on the current record, that Petitioner makes a sufficient threshold showing that a person of ordinary skill in the art would have been motivated to implement Maekawa’s display device with an adhesive member between protective film 1616 and polarizer 1606.

Patent Owner further argues that the combined teachings of Maekawa and Takahata do not disclose an “adhesive member” as recited in claim 1. Prelim. Resp. 36–37. According to Patent Owner, Takahata “states clearly that the quarter wave plate 9 and the polarizing plate 10 may be bonded together directly, and, the quarter wave plate 9 and the heat-resistant transparent resin plate 8 may be bonded together directly,” and “does *not* mention of adhesion between the polarizing plate 10 and the resin plate 8.” *Id.* at 37 (citing Ex. 1006 ¶ 35). Patent Owner also argues that claim 1 requires that the “adhesive member overlaps with the display area in a plan view, and is between the protective member and the polarizing plate,” and Takahata only discloses the structure of a touch panel that does not have a display. *Id.* (citing Ex. 1006 ¶ 1).

Based on the record before us, we are persuaded that Petitioner sufficiently establishes, for purposes of institution, that the combined teachings of Maekawa and Takahata disclose “an adhesive member” as required by claim 1. Pet. 26–29. Takahata states that “[t]he quarter wave plate 9 and the polarizing plate 10, and/or the quarter wave plate 9 and the heat-resistant transparent resin plate 8, may be bonded together directly all over (see FIGS. 1 to 3)” (Ex. 1006 ¶ 35), and “heat-resistant transparent resin plate 8 . . . is bonded together with the quarter wave plate 9 *and* the polarizing plate 10 all over so as to almost fully suppress the thermal

expansion of the quarter wave plate 9 and the polarizing plate 10” (*id.* ¶ 37) (emphasis added). Takahata also teaches that “[a]dhesives to be used for the bonding may be given by acrylate ester copolymer or other acrylic resins, urethane resins, silicon resins, rubber resins, aqueous or UV-curable adhesives, and the like.” *Id.* ¶ 35. Taken together, these disclosures in Takahata appear to teach that heat-resistant transparent resin plate 8 can be bonded to polarizing plate 10 using an adhesive, which is consistent with Petitioner’s contentions on this record. *See* Pet. 28, 40 (providing an annotated version of Takahata Fig. 2 showing an adhesive layer between protective resin plate 8 and polarizing plate 10); Ex. 1002 ¶ 67 (same).

With respect to element 1[n]’s requirement that “the adhesive member overlaps with the display area in a plan view, and is between the protective member and the polarizing plate,” we note that Petitioner argues that “Takahata does not constrain the positioning of its adhesive member to only the non-display area periphery of the protective member/polarizing plate” and “explains that its protective resin plate and polarizing plate ‘may be bonded together directly all over’ by an adhesive.” Pet. 41 (citing Ex. 1006 ¶¶ 35, 37, 48; Ex. 1002 ¶ 89). Moreover, Petitioner relies on Maekawa, not Takahata, as disclosing the claimed display area. Pet. 17–19 (citing Ex. 1005 ¶¶ 26, 43, 67, 257, 273, 296, 327–328, Fig. 16). Patent Owner’s argument that Takahata does not disclose the structure of an LCD display device, therefore, attacks the references individually, rather than as part of the asserted combination. *See* Prelim. Resp. 37. Nonobviousness cannot be established by attacking the references individually when the ground of unpatentability is predicated upon a combination of prior art disclosures. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *see also In re Keller*, 642 F.2d 413, 426 (Fed. Cir. 1981) (“But one cannot show non-

obviousness by attacking references individually where, as here, the [grounds of unpatentability] are based on combinations of references.”).

Patent Owner also argues that Takahata does not disclose a “protective member” as recited in element 1[h] and therefore “cannot disclose the claimed range of thickness for a ‘protective member’” recited in element 1[q]. Prelim. Resp. 37–42. According to Patent Owner, “Petitioner wrongly equates the protective member of the ’299 Patent with the heat-resistant transparent resin plate 8 of *Takahata*,” even though Takahata never refers to heat-resistant transparent resin plate 8 using the word “protective.” *Id.* at 37–38. Patent Owner argues that Takahata’s heat-resistant transparent resin plate 8 serves a different purpose from the protective member described and claimed in the ’299 patent, and “*Takahata* does not ascribe any protective features to this layer, but relies on other treatments to provide protection.” *Id.* at 41.

We disagree, on the current record, with Patent Owner’s characterization of Takahata’s heat-resistant transparent resin plate 8 as not “protective.” Takahata does ascribe protective features to this layer, namely to “suppress the thermal expansion of the quarter wave plate 9 and the polarizing plate 10 and to thereby maintain a stable state free from occurrence of waviness and strain under a high-temperature environment.” Ex. 1006 ¶ 37. Takahata also characterizes the panel as a whole as highly durable and “free from occurrence of deformation of its appearance configuration as well as deterioration of its antireflection characteristics.” *Id.* ¶¶ 1, 57. The challenged claims recite a “protective member,” but do not specify its function or the nature of the damage it prevents. It would be improper to read such a limitation from the Specification into the claim. *See* Ex. 1001, 13:11–15 (“the protective cover . . . functions to prevent the

surface . . . of the liquid crystal display panel from being damaged or prevent the liquid crystal display panel from being cracked upon exertion of pressure on the liquid crystal display panel.”).

Moreover, Petitioner relies on Maekawa’s teaching of protective film 1616, not on Takahata’s heat-resistant transparent resin plate 8, as satisfying element 1[h]. Pet. 24–25 (citing Ex. 1005 ¶¶ 298, 322). Additionally, with respect to element 1[q]’s requirement that “the thickness of the protective member is at least 0.2 mm and no greater than 1.0 mm,” Petitioner argues that a person of ordinary skill in the art would have been motivated to implement Maekawa’s protective film 1616 with a thickness of at least 0.2 mm and no greater than 1.0 mm to achieve the benefits that Takahata teaches result from using heat-resistant transparent resin plate 8 at that thickness:

to keep the Maekawa’s polarizer “in a stable state free from occurrence of waviness or strain” and “withstand the force” with which the polarizer “tends to be deformed” and “allow[] the input by pen or finger to be done adequately lightly even when incorporated as one constituent layer of the upper electrode plate 1 by virtue of its high flexibility as compared with glass plates.”

Id. at 45 (quoting Ex. 1006 ¶¶ 41–42; citing Ex. 1002 ¶ 97). Patent Owner’s argument that Takahata does not disclose a protective member is inconsistent with Takahata’s characterization of heat-resistant transparent resin plate 8 and again improperly attacks the references individually, rather than as part of the combination with Maekawa that Petitioner proposes. *See In re Merck*, 800 F.2d at 1097; *In re Keller*, 642 F.2d at 426.

Having reviewed the arguments in the Petition and the Preliminary Response, as well as the evidence of record, we are persuaded that Petitioner’s discussions of the particular structures in Maekawa and

Takahata, and the explanation in the Petition and the Flasck Declaration, are sufficient to establish a reasonable likelihood that Petitioner would prevail in showing that the subject matter of independent claim 1 would have been obvious over the combined teachings of Maekawa and Takahata. We also have considered the parties' arguments and evidence with respect to claims 3–5 (which depend from claim 1), 6, and 8–11 (which depend from claim 6) 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

Petitioner contends that dependent claims 2 and 7 would have been obvious over the combined teachings of Maekawa, Takahata, and Nakanishi, and dependent claims 15 and 16 would have been obvious over the combined teachings of Maekawa, Takahata, and Nagano. Pet. 62–72. Having determined that Petitioner establishes a reasonable likelihood of showing that at least one of the challenged claims is unpatentable, we 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”).

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 '299 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 all 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.

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