Paper 9 Date: December 16, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
BOE TECHNOLOGY GROUP CO., LTD., Petitioner,
v.
138 EAST LCD ADVANCEMENTS LIMITED, Patent Owner.
IPR2024-00977 Patent 9,557,606 B2

Before GRACE KARAFFA OBERMANN, GEORGE R. HOSKINS, and CHRISTOPHER M. KAISER, *Administrative Patent Judges*.

KAISER, Administrative Patent Judge.

DECISION
Denying Institution of *Inter Partes* Review 35 U.S.C. § 314, 37 C.F.R. § 42.4

I. INTRODUCTION

A. Background and Summary

BOE Technology Group Co., Ltd. ("Petitioner") filed a Petition (Paper 2, "Pet.") requesting *inter partes* review of claims 7–13 and 15–20 ("the challenged claims") of U.S. Patent No. 9,557,606 B2 (Ex. 1001, "the '606 patent"). 138 East LCD Advancements Limited ("Patent Owner") filed a Preliminary Response (Paper 6, "Prelim. Resp."). With our authorization, Petitioner filed a Reply to Patent Owner's Preliminary Response (Paper 7, "Prelim. Reply"), and Patent Owner filed a Preliminary Sur-Reply (Paper 8, "Prelim. Sur-Reply").

We have authority, acting on the designation of the Director, to determine whether to institute an *inter partes* review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). *Inter partes* review may not be instituted unless "the information presented in the petition filed under [35 U.S.C.] section 311 and any response filed under [35 U.S.C.] section 313 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(a) (2018). "When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim." 37 C.F.R. § 42.108(a) (2023).

For the reasons set forth below, upon considering the briefing and the evidence of record, we determine that the information presented in the Petition does not establish a reasonable likelihood that Petitioner will prevail with respect to any of the challenged claims. Accordingly, we do not institute *inter partes* review.

B. Real Parties-in-Interest

Petitioner identifies BOE Technology Group Co., Ltd. as the real party-in-interest. Pet. 107. Patent Owner identifies 138 East LCD Advancements Limited and Longitude Licensing Limited as the real parties-in-interest. Paper 4, 1.

C. Related Matters

The parties identify the following related court proceeding: *Longitude Licensing Ltd. v. BOE Tech. Group Co., Ltd.*, Case No. 2:23-cv-00515-JRG-RSP (E.D. Tex.). Pet. 107; Paper 4, 1.

D. The '606 Patent

The '606 patent is titled "Liquid Crystal Display Device Having Rectangular Close-Shape Seal Members" and issued on January 31, 2017. Ex. 1001, codes (45), (54). It "relates to a method of manufacturing a liquid crystal device, to a liquid crystal device, and an electronic apparatus." *Id.* at 1:19–21.

The '606 patent describes an earlier method of manufacturing a liquid crystal device. *Id.* at 1:27–45. In this method, a sealant would be coated "in a peripheral portion of a surface of one substrate." *Id.* at 1:27–29. A "liquid crystal injection hole" would then be "formed at a part of the sealant." *Id.* at 1:29–31. "[T]he other substrate [would be] bonded to the one substrate via the sealant." *Id.* at 1:31–33. After this "cell is formed," it is subjected to vacuum and "brought back to atmospheric pressure while the liquid crystal injection hole is dipped" so "the liquid crystal cell is filled with liquid crystal by means of a pressure difference." *Id.* at 1:33–41. The '606 patent describes this method as having the disadvantage of "tak[ing] an extremely long time." *Id.* at 1:41–45. As such, the '606 patent describes a "dropping

assembly method" "in which liquid crystal is dropped onto one substrate in which a frame-shaped sealant is provided with no liquid crystal injection hole, and the other substrate is then bonded to the one substrate." *Id.* at 1:46–50.

E. Illustrative Claim

Petitioner challenges claims 7–13 and 15–20 of the '606 patent. Claims 7 and 13 are independent. Claim 7 is illustrative; it is reproduced below.

7. A display device, comprising:

- a first substrate including a pixel region and a seal region which is defined around the pixel region on a first surface of the first substrate, the pixel region including a plurality of pixels and a plurality of active elements, and the seal region forming a rectangular ring shape, wherein the active elements are thin film transistors disposed on the first substrate; and
- a second substrate including a common electrode on a second surface; and
- a seal member bonding the first substrate and the second substrate so that the first surface faces the second surface and the common electrode is disposed opposite to the plurality of pixels,
- wherein the first substrate includes a protruding region which protrudes over the second substrate in a plan-view of the first substrate,
- the seal region includes a first side, a second side, a third side and a fourth side, the first side is positioned between the pixel region and the protruding region, and opposed to the third side, and the second side is opposed to the fourth side,
- the seal member is disposed between the first substrate and the second substrate, and positioned on the first side, the second side, the third side and the fourth side continuously, forms a closed-ring shape in which the pixel region is positioned

IPR2024-00977 Patent 9,557,606 B2

> without protruding from the second substrate in the planview of the first substrate, and is formed continuously around the entire pixel region without the use of a plug,

- a first part of the seal member disposed on the third side which is opposed to the protruding region with respect to the pixel region includes a plurality of conductive particles,
- a plurality of dot conductive points are disposed on the third side of the first substrate, all of the plurality of the dot conductive points are electrically connected to the common electrode, and
- each of the plurality of the dot conductive points are spaced apart from each other,
- wherein the first substrate includes a plurality of wiring lines that connect to the plurality of active elements, and the plurality of wiring lines extend onto the protruding region across the seal member without connecting to the dot conductive points.

Ex. 1001, 55:38-56:15.

F. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 19–104):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
7–13, 20	102	Fujikawa ¹
7–13, 15–20	103	Fujikawa
7–13, 15–20	103	Fujikawa, Kang ²
7–13, 15–20	103	Fujikawa, Ikeguchi ³
7–13, 15–20	103	Fujikawa, Kang, Ikeguchi

In support of its unpatentability arguments, Petitioner relies on the declaration of Alex Z. Kattamis, Ph.D., P.E. (Ex. 1004).

II. ANALYSIS

A. Legal Standards

In *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under 35 U.S.C. § 103 that requires consideration of four factors: (1) the "level of ordinary skill in the pertinent art," (2) the "scope and content of the prior art," (3) the "differences between the prior art and the claims at issue," and (4) if in evidence, "secondary considerations" of non-obviousness, such as "commercial success, long-felt but unsolved needs, failure of others, etc." *Id.* at 17–18. "While the sequence of these questions might be reordered in any particular case," *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007), the U.S. Court of Appeals for the Federal Circuit has repeatedly emphasized that "it is error to reach a conclusion of obviousness until all those factors are considered," *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1328 (Fed. Cir. 2016). Because Patent Owner does not address objective

¹ US 2003/0174271 A1, published Sept. 18, 2003 (Ex. 1005).

² US 2004/0257504 A1, published Dec. 23, 2004 (Ex. 1006).

³ JP 2003-280030 A, published Oct. 2, 2003 (Ex. 1007, English translation provided as Ex. 1008).

evidence of non-obviousness, we focus solely on the first three *Graham* factors.

B. Level of Ordinary Skill in the Art

The level of ordinary skill in the pertinent art at the time of the invention is a factor in how we construe patent claims. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). It is also one of the factors we consider when determining whether a patent claim is obvious over the prior art. *See Graham*, 383 U.S. at 17–18.

Factors pertinent to a determination of the level of ordinary skill in the art include "(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field." *Envtl. Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 696–697 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). "Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case." *Id.*

Petitioner contends that one of ordinary skill in the art "would have had at least a Bachelor's degree in electrical engineering, computer science, physics, or a similar field and at least two years of experience designing semiconductor display devices, including LCD displays." Pet. 19. Petitioner also asserts that "[a]dditional relevant work experience can compensate for less education, and *vice versa*." *Id.* On the record presented, Patent Owner "does not dispute the level of skill for a person of ordinary skill in the art . . . set forth in the Petition." Prelim. Resp. 8. Neither party

explains why the outcome of this case would be affected by the adoption of any particular proffered definition of a person of ordinary skill in the art.

For purposes of this Decision, we adopt Petitioner's assessment of the level of ordinary skill in the art, as it appears consistent with the '606 patent and the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

C. Claim Construction

We apply the same claim construction standard used in the federal courts—in other words, the claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b), which is articulated in *Phillips*. *See* 37 C.F.R. § 42.100(b). Under the *Phillips* standard, the "words of a claim 'are generally given their ordinary and customary meaning," which "is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips*, 415 F.3d at 1312–13.

Petitioner argues that "[n]o terms require construction because the claims encompass the prior-art mappings under any reasonable construction consistent with the *Phillips* standard." Pet. 18. Patent Owner argues that "[n]o claim term requires express construction to determine that the Petition does not establish a reasonable likelihood of unpatentability of any claim and, thus, deny institution." Prelim. Resp. 7.

As discussed below, we are able to determine whether to institute review without resolving the construction of any claim terms. Accordingly, we need not and do not construe any terms expressly. *See Realtime Data*, *LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) ("The Board is required")

to construe 'only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy." (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Asserted Anticipation by or Obviousness over Fujikawa

Petitioner argues that claims 7–13 and 20 were anticipated by Fujikawa, as well as that claims 7–13 and 15–20 would have been obvious over Fujikawa. Pet. 19–81. Patent Owner disagrees. Prelim. Resp. 8–38. Based on the record presented, we are not persuaded that Petitioner has established a reasonable likelihood of prevailing on these asserted grounds with respect to any claim.

1. Overview of Fujikawa

Fujikawa is a U.S. patent application titled "Electrooptic Device and Electronic Device." Ex. 1005, code (54). It "relates to an electrooptic device" for use in portable electronic devices. *Id.* ¶¶ 2, 10. According to Fujikawa, "a so-called frame region 100b lies around the image display region 10a, and does not directly contribute to the display." *Id.* ¶ 10, Fig. 1(A). "When the device is mounted in a portable device, it is required that the image display region 10a should be large and that the entire display should be small for size reduction of the device." *Id.* ¶ 10. To achieve this, Fujikawa "decrease[s] the proportion of the width of the frame region 100b to the total size of the liquid crystal device 100." *Id.* This is complicated by the presence of several components within the frame region, including "the data-line driving circuit 101, the scanning-line driving circuits 104, the lines 109, [and] the conductive electrodes 106." *Id.* Thus, Fujikawa seeks to "improv[e] the layout of peripheral circuits" to "narrow[]" this peripheral region. *Id.* ¶¶ 11–23.

2. Analysis of Claim 7

a) Disputed Limitation: "Wherein the First Substrate Includes a Plurality of Wiring Lines that Connect to the Plurality of Active Elements, and the Plurality of Wiring Lines Extend onto the Protruding Region Across the Seal Member Without Connecting to the Dot Conductive Points"

Claim 7 recites "wherein the first substrate includes a plurality of wiring lines that connect to the plurality of active elements, and the plurality of wiring lines extend onto the protruding region across the seal member without connecting to the dot conductive points." Ex. 1001, 56:11–15. Petitioner contends that Fujikawa discloses this limitation. Pet. 47–50. Patent Owner disagrees. Prelim. Resp. 22–25.

In arguing that Fujikawa discloses this limitation, Petitioner provides an annotated version of Fujikawa's Figure 2, which is reproduced below:

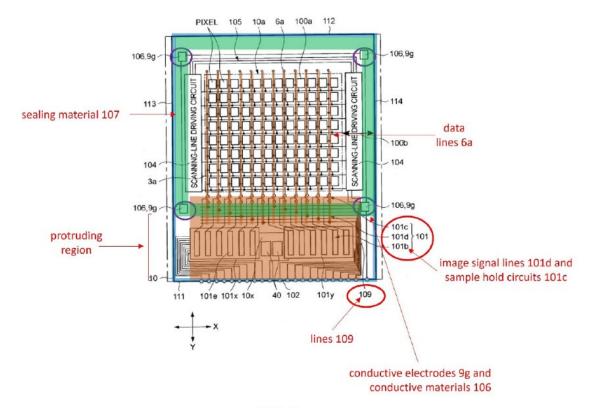


FIG.2

Pet. 50. Petitioner's annotated version of Figure 2 depicts sealing material 107 in a rectangular ring around a region that contains a plurality of pixels, a plurality of data lines 6a connected to the pixels, and a plurality of sample hold circuits 101c, with each sample hold circuit connected to a data line. *Id.* The figure also depicts image signal lines 101d with one end connected to the sample hold circuits and the other end connected to lines 109, with lines 109 being located on a protruding region outside the ring of sealing material 107. *Id.*

According to Petitioner, "[e]ach wiring line in *Fujikawa* comprises three line segments, i.e., data line 6a, image signal line 101d, and line 109." *Id.* at 49. Petitioner argues that, "[w]hen a shift register 101b outputs an enabling signal, the corresponding hold circuit 101c (a switch) is closed; and as a result, the corresponding data line 6a, signal line 101d, and line 109 are all directly connected." *Id*.

Patent Owner responds that the collection of data line 6a, signal line 101d, and line 109 does not form a wiring line within the meaning of that term in claim 7 of the '606 patent. Prelim. Resp. 22–25. According to Patent Owner, "sample hold circuits 101c... stand between lines 109 and image signal lines 101d, on one side, and data lines 6a" on the other side, which prevents those three circuit elements from being treated as a single wiring line. *Id.* at 24–25.

On the record presented, there is evidence to support Patent Owner's view. First, as Petitioner admits, data line 6a is not connected to image signal line 101d and line 109 other than when sample hold circuit 101c connects them due to shift register 101b outputting an enabling signal. Pet. 49. This is supported by the layout of the four elements in Fujikawa's

Figure 2. Ex. 1005, Fig. 2 (depicting sample hold circuits 101c between and connecting data lines 6a and signal lines 101d). In addition, Patent Owner's declarant, Dr. E. Fred Schubert, testifies that "two separate lines straddling circuitry are [not] *one* line." Ex. 2001 ¶ 64.

The dispute between the parties on this issue is largely one of claim construction: should the term "wiring line" in claim 7 be construed broadly enough to encompass a collection of lines separated by a sample hold circuit? In order to determine that Fujikawa discloses or teaches the recited wiring lines, we would need to answer this question in the affirmative. Yet, as discussed above, neither party proposes construing "wiring line," or any other term used in the claims of the '606 patent. Pet. 18; Prelim. Resp. 7. The failure to argue for and sufficiently support a broad construction of the term "wiring line" means that Petitioner does not show sufficiently, for purposes of supporting institution of review, that Fujikawa discloses or teaches the "wiring line" limitation of claim 7.

b) Conclusion Regarding Claim 7

Based on the record presented, we determine that Petitioner has not shown that there is a reasonable likelihood that Petitioner will prevail in demonstrating that claim 7 is unpatentable as anticipated by or obvious in view of Fujikawa.

3. Analysis of Claim 13

a) Disputed Limitations: "A Plurality of Wiring Elements that Connect to the Plurality of Active Elements"; "The Plurality of Wiring Lines Extend onto the Protruding Region Across the Seal Member Without Connecting to the Dot Conductive Points"

Claim 13 recites "a plurality of wiring elements that connect to the plurality of active elements" and "the plurality of wiring lines extend onto the protruding region across the seal member without connecting to the dot conductive points." Ex. 1001, 56:48–50, 57:27–29. Petitioner contends that Fujikawa discloses these limitations. Pet. 64, 74. Patent Owner disagrees. Prelim. Resp. 31–32.

In arguing that Fujikawa discloses this limitation, Petitioner relies on the arguments discussed above with respect to claim 7. For the reasons discussed above, we do not find those arguments persuasive.

b) Conclusion Regarding Claim 13

Based on the record presented, we determine that Petitioner has not shown that there is a reasonable likelihood that Petitioner will prevail in demonstrating that claim 13 is unpatentable as anticipated by or obvious in view of Fujikawa.

4. *Analysis of Claims 8–12, 15–20*

Petitioner argues that claims 8–12 and 20 were anticipated by, as well as that these claims would have been obvious over, Fujikawa. Pet. 50–63, 81. Petitioner also argues that claims 15–19 would have been obvious over Fujikawa. *Id.* at 74–81. Each of these claims "incorporate[s] by reference all the limitations of" claim 7 or claim 13, because each depends from one of those claims. 35 U.S.C. § 112(d) (2023); Ex. 1001, 56:16–46, 57:34–58:35. As discussed above, however, Petitioner has not shown sufficiently that

Fujikawa discloses or teaches every limitation of either claim 7 or claim 13. Accordingly, Petitioner has not shown that there is a reasonable likelihood that Petitioner will prevail in demonstrating that any of claims 8–12 and 15–20 is unpatentable as anticipated by or obvious in view of Fujikawa.

E. Asserted Obviousness over Fujikawa and Kang

Petitioner argues that claims 7–13 and 15–20 would have been obvious over the combination of Fujikawa and Kang. Pet. 82–87. Patent Owner disagrees. Prelim. Resp. 39–42.

1. Overview of Kang

Kang is a U.S. patent application titled "Liquid Crystal Display Panel." Ex. 1006, code (54). It "relates to a liquid crystal display panel, and more particularly, to a liquid crystal display panel capable of preventing air from flowing into an image display part of a liquid crystal display panel." *Id.* ¶ 3. According to Kang, liquid crystal display panels can be formed by a "vacuum injection method," in which "a liquid crystal injection hole of a liquid crystal display panel" is "dipp[ed]" "into a container in a vacuum chamber filled with liquid crystal." *Id.* ¶ 63. Liquid crystal is "forced into the liquid crystal display panel by the pressure difference between the inner side and the outer side of the liquid crystal display panel." *Id.* Once the panel is filled, "the liquid crystal injection hole is sealed." *Id.* Kang explains that this vacuum method "has a number of problems." *Id.* ¶ 65. For example, it can "take[] a long time to fill the liquid crystal in the liquid crystal display panel." *Id.* ¶ 66. It also "consumes" "a large quantity of liquid crystal," increasing the "unit price" of the display. *Id.* ¶ 67.

To "overcome these problems," Kang notes that a "dropping method" has been "adopted." *Id.* ¶ 68. This method provides a "seal pattern"

"formed to have a closed shape that encompasses the outer edge of the image display part in order to prevent the leakage of the liquid crystal from the image display part." Id. ¶ 70. Liquid crystal is then dropped on the image display part of the substrate (instead of "filled from the outside") so the liquid crystal is "uniformly distributed . . . by the pressure generated when the" two substrates "are attached to each other." Id. ¶¶ 69–70. As Kang explains, this reduces manufacturing time and cost relative to the vacuum injection method. Id. ¶¶ 71–72.

2. Analysis

As discussed above with respect to the Fujikawa-only grounds, each of claims 7–13 and 15–20 recites a limitation requiring wiring lines that both connect to active elements within the ring formed by the sealing member and extend onto the protruding region outside the sealing member.

Ex. 1001, 56:11–15, 56:48–50, 57:27–29. In arguing for the obviousness of the challenged claims over the combination of Fujikawa and Kang,

Petitioner relies on Fujikawa teaching these limitations and does not argue that Kang teaches or suggests them. Pet. 85–86. As discussed above, however, we determine that Petitioner has not shown sufficiently that Fujikawa teaches or suggests the wiring line limitations of the challenged claims. Accordingly, we determine that Petitioner has not shown that there is a reasonable likelihood that Petitioner will prevail in demonstrating that any challenged claim is unpatentable as obvious in view of the combination of Fujikawa and Kang.

F. Asserted Obviousness over Fujikawa and Ikeguchi

Petitioner argues that claims 7–13 and 15–20 would have been obvious over the combination of Fujikawa and Ikeguchi. Pet. 87–104. Patent Owner disagrees. Prelim. Resp. 42–61.

1. Overview of Ikeguchi

Ikeguchi is a Japanese patent application titled "Display Element and Manufacturing Method for Same." Ex. 1008, code (54). It relates to "a display element in which a non-display region can be made small and reliable conduction between two electrode substrates can be achieved." *Id.* at code (57). According to Ikeguchi, the non-display region includes space for "a connection region," "a sealing material disposition region," and "a conductive paste disposition region," with "the non-display region . . . adversely becom[ing] large if the connection region, the sealing material disposition region, and the conductive paste disposition region are provided separately." *Id.* ¶ 6. Ikeguchi discusses dispersing "conductive particles . . . in the sealing material" as a possible means of making the non-display region smaller, but it notes that this solution causes additional problems, including "poor conduction between the common electrode . . . and the connection electrode," as well as the need for "an insulating layer . . . to prevent the conductive particles . . . from adversely creating undesirable conduction." *Id.* ¶¶ 11–12. To avoid these problems, Ikeguchi teaches that "a conductive material . . . is mixed into the bonding material," but not "into the entirety of the bonding material." *Id.* ¶¶ 15–16. Instead, the conductive material is "mixed only into the portion of the bonding material that is sandwiched between the inter-substrate conducting-electrode portions." *Id.* ¶ 16.

2. Analysis

As discussed above with respect to the Fujikawa-only and Fujikawa-Kang grounds, each of claims 7–13 and 15–20 recites a limitation requiring wiring lines that both connect to active elements within the ring formed by the sealing member and extend onto the protruding region outside the sealing member. Ex. 1001, 56:11–15, 56:48–50, 57:27–29. In arguing for the obviousness of the challenged claims over the combination of Fujikawa and Ikeguchi, Petitioner argues that Ikeguchi teaches or suggests these limitations and that a person of ordinary skill in the art would have had a reason to combine the teachings of Ikeguchi with those of Fujikawa. Pet. 99–102.

Patent Owner argues that "[t]he Petition's suggestion that Ikeguchi would have motivated a [person of ordinary skill in the art] to change Fujikawa's wiring lines layout is conclusory and unsupported." Prelim. Resp. 56. On the record presented, we agree. Petitioner's argument for a person of ordinary skill in the art having a reason to combine the teachings of Fujikawa and Ikeguchi is

[a] POSITA would have been motivated to implement [Ikeguchi's] design in *Fujikawa*.... The driver integrated circuit can be either within the sealing region or outside the sealing region. It would have been the simple selection of a known design to obtain a predictable result to have the driver integrated circuit located outside the seal region and in turn the wires that connect that circuit to the TFTs in the display area cross the seal region.

Pet. 100–101 (citing Ex. 1004 ¶ 226; Ex. 1025 ¶¶ 17–19, Fig. 1). The stated reason for the combination, that "[i]t would have been the simple selection of a known design to obtain a predictable result" is not explained further, so

it is conclusory. *Id.* In addition, the evidence Petitioner cites to support this conclusory statement does not provide adequate evidentiary support.

First, Dr. Kattamis testifies in the cited testimony that

[a] POSITA would have been motivated to implement [Ikeguchi's] design in *Fujikawa*. The driver integrated circuit can be within the sealing region or outside the sealing region. It would have been the simple selection of a known design to obtain a predictable result to have the driver integrated circuit outside the seal region and in turn have the wires that connect that circuit to the TFTs in the display area cross the seal region.

Ex. 1004 ¶ 226 (citing Ex. 1025 ¶¶ 17–19, Fig. 1).

This testimony is not adequate to support institution of trial because, on this record, is not supported sufficiently by the cited evidentiary support. *See Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9, 15 (PTAB Aug. 24, 2022) (precedential) (where an expert witness declaration "does not cite to any additional supporting evidence or provide any technical reasoning to support [the witness's conclusions]," it "is entitled to little weight" when deciding whether to institute review). Both Petitioner and Dr. Kattamis cite Exhibit 1025 as support for the argument that a person of ordinary skill in the art would have had a reason to combine the teachings of Ikeguchi with those of Fujikawa. Pet. 101; Ex. 1004 ¶ 226. This exhibit is entirely in Japanese, rendering it difficult to determine how the reference supports Petitioner's argument. Ex. 1025. Further, to the extent that Exhibit 1025 does support Petitioner's argument, the relevance is not stated or discussed in the Petition or in Dr. Kattamis's declaration.

Thus, Petitioner has not shown sufficiently that a person of ordinary skill in the art would have had a reason to combine the teachings of Ikeguchi with those of Fujikawa. Accordingly, we determine that Petitioner has not

shown that there is a reasonable likelihood that Petitioner will prevail in demonstrating that any challenged claim is unpatentable as obvious in view of the combination of Fujikawa and Ikeguchi.

G. Asserted Obviousness over Fujikawa, Kang, and Ikeguchi
Petitioner argues that claims 7–13 and 15–20 would have been
obvious over the combination of Fujikawa, Kang, and Ikeguchi. Pet. 104.
Patent Owner disagrees. Prelim. Resp. 61.

In arguing for the obviousness of the challenged claims over the combination of Fujikawa, Kang, and Ikeguchi, Petitioner relies on the arguments discussed above with respect to the Fujikawa-Kang and Fujikawa-Ikeguchi grounds. Pet. 104. As discussed above, we do not find those arguments persuasive on the record presented. Accordingly, we determine that Petitioner has not shown that there is a reasonable likelihood that Petitioner will prevail in demonstrating that any challenged claim is unpatentable as obvious in view of the combination of Fujikawa, Kang, and Ikeguchi.

III. CONCLUSION

For the reasons set forth above, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any challenged claim of the '606 patent. Accordingly, we do not institute *inter partes* review.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314, the Petition is denied, and no *inter partes* review is instituted.

IPR2024-00977 Patent 9,557,606 B2

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