

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HISENSE USA CORPORATION

Petitioner,

v.

PHENIX LONGHORN LLC,

Patent Owner.

Case No. IPR2025-01004

U.S. Patent No. 7,557,788

PATENT OWNER'S PRELIMINARY RESPONSE

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EXHIBIT LIST

Exhibit No.	Description
2001	https://www.uspto.gov/sites/default/files/documents/InterimProcesses-PTABWorkloadMgmt-20250326.pdf (“Acting Director Memo”)
2002	https://www.uspto.gov/patents/ptab/faqs/interim-processesworkload-management (“FAQs”)
2003	Unopposed Motion to Move Trial, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 118 (E.D. Tex. April 22, 2025)
2004	DocketNavigator Statistics – Motion Success, accessed on August 15, 2025
2005	LegalMetric Nationwide Report, Stay Pending Inter Partes Review in Patent Cases, August 2012 - October 2024
2006	Order, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 129 (E.D. Tex. May 28, 2025)
2007	First Amended Docket Control Order, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 132 (E.D. Tex. June 9, 2025)
2008	Unopposed Application for Extension of Time to Answer Complaint, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 25 (E.D. Tex. June 4, 2024)
2009	Defendants’ P.R. 3-3 and 3-4 Invalidity Contentions, dated November 15, 2024
2010	Exhibit F to Motion to Amend Invalidity Contentions, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 145-7 (E.D. Tex. July 30, 2025)
2011	Sotera Stipulation, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 153 (E.D. Tex. August 6, 2025)
2012	Fifth Amended Complaint, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 125 (E.D. Tex. May 22, 2025)
2013	Waiver of Service, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 7 (E.D. Tex. November 20, 2023)
2014	Answer to Fifth Amended Complaint, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 130 (E.D. Tex. June 5, 2025)
2015	Declaration of Joesph C. McAlexander, Regarding U.S. Patent No. 7,557,788

2016	Claim Construction Order, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 176 (E.D. Tex. Aug. 18, 2025)
2017	Plaintiff's Opening Claim Construction Brief, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 134 (E.D. Tex. June 24, 2025)
2018	Defendants' Responsive Claim Construction Brief, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 141 (E.D. Tex. July 14, 2025)
2019	Plaintiff's Reply Claim Construction Brief, <i>Phenix Longhorn LLC v. AU Optronics Corp.</i> , Case No. 2:24-cv-00477, Dkt. 143 (E.D. Tex. Aug. 18, 2025)

I. INTRODUCTION

Pursuant to 35 U.S.C. § 323 and 37 C.F.R. § 42.207, Patent Owner Phenix Longhorn, LLC (“Phenix” or “Patent Owner”) submits this Preliminary Response to Hisense USA Corporation’s (“Hisense” or “Petitioner”) Petition for *Inter Partes* Review of U.S. Patent No. 7,557,788 (“the ’788 Patent”) and respectfully requests that the Board deny institution of Hisense’s petition for the reasons presented herein.

First, institution should be denied because it is time-barred under 35 U.S.C. § 315(b). The Petition seeks inter partes review (“IPR”) of claims 1–3 and 5–6 (the “Challenged Claims”) of U.S. Patent No. 7,557,788 (the “’788 Patent,” EX1001). The ’788 Patent and U.S. Patent No. 7,233,305 (the “’305 Patent”) are the subject of the co-pending patent infringement action that Phenix brought on October 10, 2023 against AU Optronics Corporation (“AUO”) and Hisense Electronica Mexico, S.A. DE C.V. (“Hisense Mexico”) in the Eastern District of Texas as Civil Action No. 2:24-cv-00477 (the “EDTX Litigation”). On October 2, 2024, Phenix filed an amended complaint in the EDTX Litigation to add Petitioner as a defendant.¹

¹ Phenix later amended its complaint in the EDTX Litigation on December 3, 2024 to add Hisense Visual Technology Co., Ltd. (“Hisense Visual”) as a defendant. Petitioner has identified Hisense Mexico and Hisense Visual as real parties-in-interest or privies of Petitioner. *See* Paper 1 at 1.

AUO waived service of the EDTX infringement complaint on November 20, 2023; therefore, any petition for *inter partes* review filed by AUO or any party in privity with AUO had to be filed no later than November 20, 2024. AUO, however, is both a real party in interest and in privity with Petitioner. Consequently, the Petition—filed after the one-year deadline—is time barred, and the Board should deny institution.

Moreover, the Petition is deficient pursuant to 37 C.F.R. § 42.104(b)(3) because it fails to identify *specific* portions of the specification that describe the structure of at least two alleged means-plus function terms. As such, institution should be denied.

Finally, Petitioner's merits are weak. Specifically, a person of ordinary skill would have no motivation to modify any of the primary references with Kang as suggested by the Petition.

Accordingly, for these many reasons, institution should be denied.

II. BACKGROUND

A. The '788 Patent

The '788 Patent describes and claims a method for calibrating liquid crystal displays (LCDs) to a desired gamma curve to compensate for panel-to-panel variations introduced during the manufacturing process. EX1001 at 2:17-28, Claim 1. To do so, the '788 Patent describes and claims methods wherein

reprogrammable and non-volatile storage cells are programmed with varying levels of gamma reference voltages, testing the display with a sensor, and optimizing the reprogrammable gamma reference voltages via a predetermined algorithm and storing the final desired gamma reference voltages. *Id.* at Claim 1.

B. Challenged Claims

The '788 Patent has 6 claims, 5 of which (all except claim 4) are challenged in the Petition.

C. Person of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art (“POSITA”) at the time of the invention of the '788 Patent “would have at least a bachelor of science degree in physics, electrical engineering, or the equivalent thereof and three (3) years of experience in circuit design or display technologies . . . [and] would have had knowledge of integrated circuits, gamma correction, and storage of gamma correction voltage values within memory, and would have understood how to search available literature for relevant publications.” Petition at 6. Because this definition does not affect Phenix’s arguments in favor of patentability, solely for the purposes of this Preliminary Response, and without agreeing or disagreeing as to its correctness, Phenix and its expert Joe McAlexander apply the same definition. *See* EX2015 ¶¶ 15–20.

D. Priority Date

The '788 Patent claims priority to Provisional Application No. 60/477,680 filed on June 11, 2003. EX1001, Cover. Although the Petition does not address the priority date of the '788 Patent, Phenix submits that the priority date of the '788 Patent is June 11, 2003. Thus, Pre-AIA 35 U.S.C. §§ 102 and 103 apply.

E. Alleged Prior Art

Petitioner's cited prior art consists of only four alleged references, arranged in various combinations: JP H06217239A ("Nonomura"); JP H07152347A ("Uehara"); U.S. Patent Publication No. 2002/0063666A1 ("Kang"); and U.S. Patent Publication No. 5,754,150 ("Tobiya").

1. The Nonomura Reference (EX1005)²

Nonomura is directed to a liquid crystal project having a gamma correction function. EX1006 ¶ 54. As admitted by the Petition (Petition at 14-18), Nonomura alone fails to disclose or render obvious "varying gamma reference voltage levels on columns of said display."

² In its discussion of this reference, Phenix relies on Petitioner's certified translation of Nonomura, EX1006. For purposes of this Preliminary Response only, Phenix does not contest the accuracy of this translation but expressly reserves its rights to do so in the future and in any other proceeding.

2. The Uehara Reference (EX1008)³

Uehara is directed to a gamma correction method for a liquid crystal display. EX1009 ¶ 54. As admitted by the Petition (Petition at 34-36), Uehara alone fails to disclose or render obvious “varying gamma reference voltage levels on columns of said display.”

3. The Tobiya Reference (EX1010)

Tobiya is directed to a display characteristic correction system and method. EX1010 ¶ [0036]. As admitted by the Petition (Petition at 52-54), Tobiya alone fails to disclose or render obvious “varying gamma reference voltage levels on columns of said display.”

4. The Kang Reference (EX1007)

Kang is directed to a gamma voltage and video data correcting apparatus and method in a liquid crystal display that is capable of improving a display quality of the LCD. EX1007 ¶ [0021]. Kang describes an LCD that includes a digital video card 81, a multi-mode gamma voltage generator 84, a column driver 83 for supplying data to data lines of the liquid crystal panel 86, a row driver 85 for sequentially driving gate lines of the liquid crystal panel 86, and a controller 82 for

³ In its discussion of this reference, Phenix relies on Petitioner’s certified translation of Uehara, EX1009. For purposes of this proceeding only, Phenix does not contest the accuracy of this translation but expressly reserves its rights to do so in any other proceeding.

controlling the column driver 83 and the row driver 85. *Id.* at ¶ [0048]. The multi-mode gamma voltage generator 84 stores therein gamma data and divides, by utilizing the selected gamma data, a gamma voltage into a gray level range to be displayed and applies it to the column driver 83. *Id.* at ¶ [0049].

III. CLAIM CONSTRUCTION

A. The Petition Does Not Comply with 37 C.F.R. § 42.104(b)(3), Warranting Denial of Institution.

The Petition is deficient pursuant to 37 C.F.R. § 42.104(b)(3) and, as such, institution should be denied. Specifically, “[w]here claim language *may* be construed according to 35 U.S.C. § 112(f), a petitioner *must* provide a construction that includes both the claimed function and the specific portions of the specification that describe the structure, material, or acts corresponding to each claimed function.” Patent Trial and Appeal Board Consolidated Trial Practice Guide: November 2019, Section II.B.6 (available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf?MURL=TrialPracticeGuideConsolidated>) (emphasis added) (hereinafter “CTPG”). A petitioner who chooses not to address construction under § 112(f) “risks failing to satisfy the requirement of 37 C.F.R. § 42.104(b)(3).” *Id.* at 45; *10x Genomics, Inc. v. President and Fellows of Harvard College*, IPR2023-01299, Paper 15 at 8 (P.T.A.B. Mar. 7, 2024) (denying institution under 37 C.F.R. § 42.104(b)(3)).

The Petition alleges that Claims 1-3 and 5-6 are unpatentable under various Grounds. *See* Petition at 4. The Petition argues that “gamma reference control capability” and “control circuit” are means plus function terms. *Id.* at 6-7.⁴ Petitioner was therefore required to provide “*specific portions* of the specification that describe the structure, material, or acts corresponding to each claimed function.” CTPG at Section II.B.6. Instead, for “gamma reference control capability,” Petitioner points broadly to “Figs. 2, 3, and 5, of Figs. 6 and 5, or equivalents thereof” as the corresponding structure. Petition at 7. For “control circuit,” Petition points broadly to “Figs. 2 and 3, or Fig. 6, or equivalents thereof” as the corresponding structure. *Id.* This superficial, amorphous identification fails to comply with the requirement of Petitioners to identify *specific portions* of the specification that describe the structure, material, or acts corresponding to each claimed function, and is fatal to the Petition. CTPG at Section II.B.6 (citing 37 C.F.R. § 42.104(b)(3)). As such, the Petition is deficient under 37 C.F.R. § 42.104(b)(3) and institution should be denied for this reason alone.

⁴ For reasons discussed in Section III.B, Phenix disagrees that all of these terms are means-plus-function terms. Nonetheless, because Petitioner is arguing they are all means-plus-function terms, Petitioner was required to identify corresponding structures for the terms, but failed to do so.

B. Proposed Claim Constructions

Other than the terms specifically addressed below, Phenix contends that each term of the challenged claims should be given its plain and ordinary meaning. Phenix reserves the right to offer additional constructions should a review be instituted on any of the proposed grounds.

The Petition provided express constructions for the terms below. *See* Petition at 6-7. However, the terms below were already the subject of extensive claim construction briefing, a *Markman* hearing, and the resulting Claim Construction Order in an ongoing parallel litigation between the parties in the EDTX Litigation. EX2016. “Any prior claim construction determination concerning a term of the claim in a civil action . . . that is timely made of record in the *inter partes* review proceeding will be considered.” 37 C.F.R. § 42.100(b); *see also Samsung Elecs. Am., Inc. v. Collision Commc’ns, Inc.*, IPR2024-01247, Paper 14 at 11-12 (P.T.A.B. Feb. 7, 2025) (adopting a district court’s previous claim construction).

For claim construction in *inter partes* review proceedings, “the parties should point out the specific portions of the specification, prosecution history, and relevant extrinsic evidence they want considered, and explain the relevancy of any such evidence to the arguments they advance. Each party bears the burden of providing sufficient support for any construction advanced by that party.” CTPG at 46. Because the Petition provides mere conclusions pertaining to Petitioner’s

proposed constructions, as opposed to *any arguments or explanations* supporting Petitioner’s constructions, Phenix respectfully submits that Hisense has not carried its burden in providing support for its advanced constructions, and the Board should not deviate from the Claim Construction Order entered in the EDTX Litigation. The Court in the EDTX Litigation already construed the disputed terms under the same standard as the Board does here, the *Phillips* standard (EX2016 at 1), and the Court in the EDTX only made its findings (in a thorough, 49-page Claim Construction Order) after consideration of the parties’ extensive claim construction briefing and arguments at a *Markman* hearing. *See, e.g.*, EX2017; EX2018; EX2019. Thus, Phenix respectfully submits that the Board reject Petitioner’s constructions and adopt the constructions of the disputed terms made by the Court in the EDTX Litigation, as shown below:

Term	Phenix’s Proposed Construction
“gamma reference control capability”	“control interface configured to program, and output, gamma reference voltage levels” (EX2016 at 32); EX2015 at ¶ 32
“control circuit”	plain meaning (EX2016 at 36); EX2015 at ¶ 33
“means for executing a predetermined algorithm according to a predetermined criteria and data sensed by said at least one sensor”	Means-plus-function terms governed by 35 U.S.C. § 112(f) Function: “executing a predetermined algorithm according to a predetermined criteria and data sensed by said at least one sensor”

	Corresponding Structure: “programming interface disclosed in the ’788 Patent configured to perform the algorithms disclosed in the ’788 Patent at 3:16–30, 6:1–31, and 6:65–7:10; and equivalents thereof” (EX2016 at 42); EX2015 at ¶ 34
“gamma reference voltage level”	plain meaning (EX2016 at 46); EX2015 at ¶ 35

IV. THE PETITION IS TIME-BARRED UNDER 35 U.S.C. § 315(b), WARRANTING DENIAL OF INSTITUTION.

Institution should be denied because Petition is time-barred pursuant to 35 U.S.C. § 315(b). Specifically, AUO waived service of summons in the EDTX Litigation on November 20, 2023. EX2013. For the reasons discussed below, AUO is a real party in interest and in privity with Petitioner. Thus, because AUO’s deadline to request inter partes review was November 20, 2024, the Petition is time-barred, and institution should be denied.

A. AUO is a Real Party in Interest

“Congress intended that the term ‘real party in interest’ have its expansive common-law meaning.” *Applications in Internet Time, LLC v. RPX Corp.*, 897 F.3d 1336, 1351 (Fed. Cir. 2018) (“AIT”); *see RPX Corp. v. Applications in Internet Time, LLC*, IPR2015-01750, Paper 128 at 2, 7 (P.T.A.B. Oct. 2, 2020) (precedential). “Determining whether a non-party is a ‘real party in interest’

demands a flexible approach that takes into account both equitable and practical considerations, with an eye toward determining whether the non-party is a clear beneficiary that has a preexisting, established relationship with the petitioner.” *AIT*, 897 F.3d at 1351; *see Ventex Co. v. Columbia Sportswear N. Am., Inc.*, IPR2017-00651, Paper 152 at 6 (P.T.A.B. Jan. 24, 2019) (precedential); *RPX*, IPR2015-01750, Paper 128 at 6.

According to the Federal Circuit, “the heart of the inquiry” concerning a real party in interest should focus on “whether a petition has been filed at a [nonparty’s] behest.” *Uniloc 2017 LLC v. Facebook Inc.*, 989 F.3d 1018, 1027–28 (Fed. Cir. 2021) (quoting *AIT*, 897 F.3d at 1351). As an example, an entity that “funds and directs and controls” an *inter partes* review constitutes a real party in interest even if that entity is not a privy of the petitioner. *Wi-Fi One, LLC v. Broadcom Corp.*, 887 F.3d 1329, 1336 (Fed. Cir. 2018) (quoting Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,760 (Aug. 14, 2012)); *see Uniloc 2017*, 989 F.3d at 1028; CTPG at 17. As another example, an “agent with an ownership interest in the subject matter of the suit, or one who is the trustee of an express trust or a party in whose name a contract has been made for the benefit of another, may qualify as a real party in interest.” *AIT*, 897 F.3d at 1357.

AUO is a real party in interest in this proceeding. Thus, 35 U.S.C. § 315(b) bars institution because Petitioner filed the Petition more than one year after the

date on which AUO waived service of a complaint alleging infringement of the '788 Patent. *See* EX2013.

In Petitioner's operative Answer, it admitted that Hisense Visual, a real party-in-interest to Petitioner and co-defendant in the EDTX Litigation, "contracts with AUO for the accused LCD panels and purchases, either directly or indirectly through one or more affiliate intermediaries, the accused LCD panels from AUO." EX2014 at ¶ 56. Petitioner further admits that the exact Hisense entity that filed the Petition "is responsible for U.S.-based activities related to the alleged infringing Hisense television products, including importing, pricing, and selling those products in the United States." *Id.* at ¶ 8. Among other things, the pre-existing contractual relationship between AUO and Petitioner directed to the products accused of infringement makes AUO a real party in interest. *See Ventex*, IPR2017-00651, Paper 152 at 8–10 (finding two supply/manufacturing contracts between a petitioner and a non-party evidence of their mutual interests of each other's commercial and financial success, further finding the non-party a real party in interest). In this respect, it is apparent that the Petition was filed at AUO's behest, which is at "the heart of the inquiry." *Uniloc 2017*, 989 F.3d at 1027–28; *see AIT*, 897 F.3d at 1351; CTPG at 14.

Further, Hisense Visual—Petitioner's real party-in-interest—has an indemnity agreement with AUO concerning the accused LCD panels, which

obligates AUO to take necessary actions and defend any lawsuit filed related to the accused LCD panels, such as the EDTX litigation. *See* Paper 1 at 1 and Paper 8 at 22 n.1.⁵ Thus, the evidence demonstrates:

- (1) Hisense Visual and AUO are parties to an agreement;
- (2) under the agreement, AUO supplies accused products to Hisense Visual; and
- (3) the Agreement includes an indemnity provision.

See Luminex Int’l Co., Ltd. v. Signify Holding BV, IPR2024-00101, Paper 10 at 37, (P.T.A.B. May 9, 2024).

Moreover, there is overlap between the invalidity positions advanced in the Petition and the joint invalidity contentions for the ’788 Patent in the EDTX Litigation, evidencing that AUO “desires review” of the ’788 Patent. *Id.* at 37. The Petition presents three Grounds of unpatentability, relying on Nonomura, Kang, Uehara, and Tobiya as prior art. Petition at ii. In Petitioner and AUO’s operative invalidity contentions in the EDTX Litigation, they rely on Uehara as a primary reference in arguing that the ’788 Patent is invalid. EX2009 at 17–18. Moreover, they rely on Kang as a primary reference in arguing that the ’305 Patent is invalid. *Id.* at 15–16. Furthermore, Petitioner and AUO were recently granted leave in the

⁵ This supply agreement was produced by Hisense Visual in the EDTX Litigation. Patent Owner sought Petitioner’s consent to file the agreement under seal in this proceeding as an exhibit during a meet and confer, but Petitioner opposed.

EDTX Litigation to amend their invalidity contentions and argue that the '788 Patent is unpatentable over Nonomura in view of Kang. *See, e.g.*, EX2011. Thus, it is clear that AUO “desires review” of the '788 Patent.

Further, from a “practical and equitable” standpoint, AUO will benefit from the redress that the Board might provide in this proceeding because a decision determining that the challenged claims are unpatentable would relieve AUO from liability for infringing the '788 Patent. For the same reasons, AUO has an interest in and will benefit from Petitioner’s actions. Petitioner and AUO have a mutual interest in establishing unpatentability/invalidity. For instance, in the EDTX Litigation, Petitioner and AUO each seek to invalidate claims of the '788 Patent and, as noted above, both the EDTX Litigation and this proceeding include largely overlapping unpatentability/invalidity contentions for the '788 Patent. Although Petitioner and AUO have a mutual interest in establishing unpatentability/invalidity, Petitioner seeks in this proceeding relief that 35 U.S.C. § 315(b) bars AUO from seeking for itself.

Thus, because Petitioner filed the Petition more than one year after the date of which AUO waived service of a complaint alleging infringement of the '788 Patent, 35 U.S.C. § 315(b) bars institution.

B. AUO is in Privity with Petitioner

Privity “prevent[s] successive challenges to a patent by those who previously have had the opportunity to make such challenges in prior litigation.” *WesternGeco LLC v. ION Geophysical Corp.*, 889 F.3d 1308, 1319 (Fed. Cir. 2018). In *Taylor v. Sturgell*, the Supreme Court provided a non-exhaustive list for examining whether the legal relationship between two parties establishes that one is the privy of the other:

(1) an agreement between the parties to be bound; (2) pre-existing substantive legal relationships between the parties; (3) adequate representation by the named party; (4) the non-party’s control of the prior litigation; (5) where the non-party acts as a proxy for the named party to relitigate the same issues; and (6) where special statutory schemes foreclose successive litigation by the non-party (e.g., bankruptcy and probate).

AIT, 897 F.3d at 1360 (citing *Taylor v. Sturgell*, 553 U.S. 880, 893–95 (2008)); *see also Ventex*, IPR2017-00651, Paper 152 at 12 (analyzing the factors in the context of an *inter partes* review proceeding). Analysis under any one of the factors can support a finding of privity. *Ventex*, IPR2017-00651, Paper 152 at 12. Here, Petitioner and AUO satisfy at least factors two, four, and five.

As discussed above, in Petitioner’s operative Answer, it admitted that Hisense Visual has an indemnification agreement with AUO and “contracts with AUO for the accused LCD panels and purchases, either directly or indirectly through one or more affiliate intermediaries, the accused LCD panels from AUO.”

EX2014 at ¶ 56; Paper 8 at 22 n.1. Petitioner goes on to admit that the exact Hisense entity that filed the Petition “is responsible for U.S.-based activities related to the alleged infringing Hisense television products, including importing, pricing, and selling those products in the United States.” *Id.* at ¶ 8. Thus, Petitioner admitted that AUO, Hisense Visual, and Petitioner have a pre-existing substantive legal relationship. Further, the contracts between AUO, Hisense Visual, and Petitioner “directly relate[s] to the product accused of infringing the patent at issue in this proceeding” because it governed the contract between Hisense Visual and AUO that resulted in Petitioner importing, pricing, and selling those products in the United States. *See Ventex*, IPR2017-00651, Paper 152 at 12. Finding AUO and Petitioner in privity with one another comports with the goal of “taking into account the practical situation, and extending privity to parties, to transactions, and other activities *relating to the property in question.*” CTPG at 15) (cleaned up). In light of the contracts between AUO, Hisense Visual, and Petitioner, it is apparent that Petitioner is acting as a proxy for AUO to litigate issues AUO is timed-barred from litigating itself.

Moreover, although this *inter partes* review proceeding was filed by attorneys working at the Kilpatrick Townsend law firm, counsel for Petitioner and AUO overlap in the EDTX Litigation. For example, attorneys working at the Perkins Coie law firm represent both Petitioner and AUO. This weighs in favor of

finding AUO and Petitioner in privy. *See Johnson Health Tech Co. Ltd. & Johnson Health Tech N. Am., Inc., v. Icon Health & Fitness, Inc.*, IPR2014-01242, Paper 16 at 10 (P.T.A.B. Feb. 11, 2015) (“While common counsel alone is not dispositive of control, we are persuaded that the actions of JHT and JHTNA in the Utah Action and the reexam have blurred sufficiently the lines of corporate separation, such that JHT exercises control, or could have exercised control, over the business matters of JHTNA.”).

Thus, 35 U.S.C. § 315(b) bars institution because Petitioner filed the Petition more than one year after the date of which AUO waived service of a complaint alleging infringement of the ’788 Patent.

V. PETITIONER’S ARGUMENTS FAIL TO ESTABLISH THE UNPATENTABILITY OF THE CHALLENGED CLAIMS.

Review should not be instituted because none of the three grounds raised in the Petition provide a basis for the Board to find that there is a reasonable likelihood of prevailing on any claim challenged in the Petition. Petitioner provides the following grounds for review.

Ground	Claims	References
1	1–3, and 5-6	Nonomura (EX1005) in view of Kang (EX1007)
2	1–3, and 5-6	Uehara (EX1008) in view of Kang (EX1007)
3	1 and 3	Tobiya (EX1010) in view of Kang (EX1007)

Below, Phenix demonstrates why each of these grounds fails to render the challenged claims unpatentable, and expressly reserves the right to provide additional reasons and support should a review be instituted on any proposed ground.

A. All Grounds of the Petition Omit Proper Construction of Terms Petitioner Alleges to be Means-Plus-Function Terms and, Therefore, Fail as a Matter of Law.

As described in detail above, although Petitioner identifies the terms as alleged means-plus-function terms, Petitioner fails to provide a specific corresponding functions and structures for the terms “gamma reference control capability,” “control circuit,” and “means for executing a predetermined algorithm according to a predetermined criteria and data sensed by said at least one sensor.” Thus, all Grounds of the Petition fail as a matter of law. *See supra*, at Section III.A (citing 37 C.F.R. § 42.104(b)(3)).

B. Applying the Claims as Properly Construed, the Petition Fails to Demonstrate How the Prior Art Discloses or Renders Obvious Each and Every Claim Limitation.

Applying the claims as properly construed in Section III.B, the Petition fails to demonstrate how the prior art discloses or renders obvious each and every limitation of the Challenged Claims. As a non-limiting example, the term “gamma reference control capability” properly construed means a “control interface configured to program, and output, gamma reference voltage levels.” *Supra*

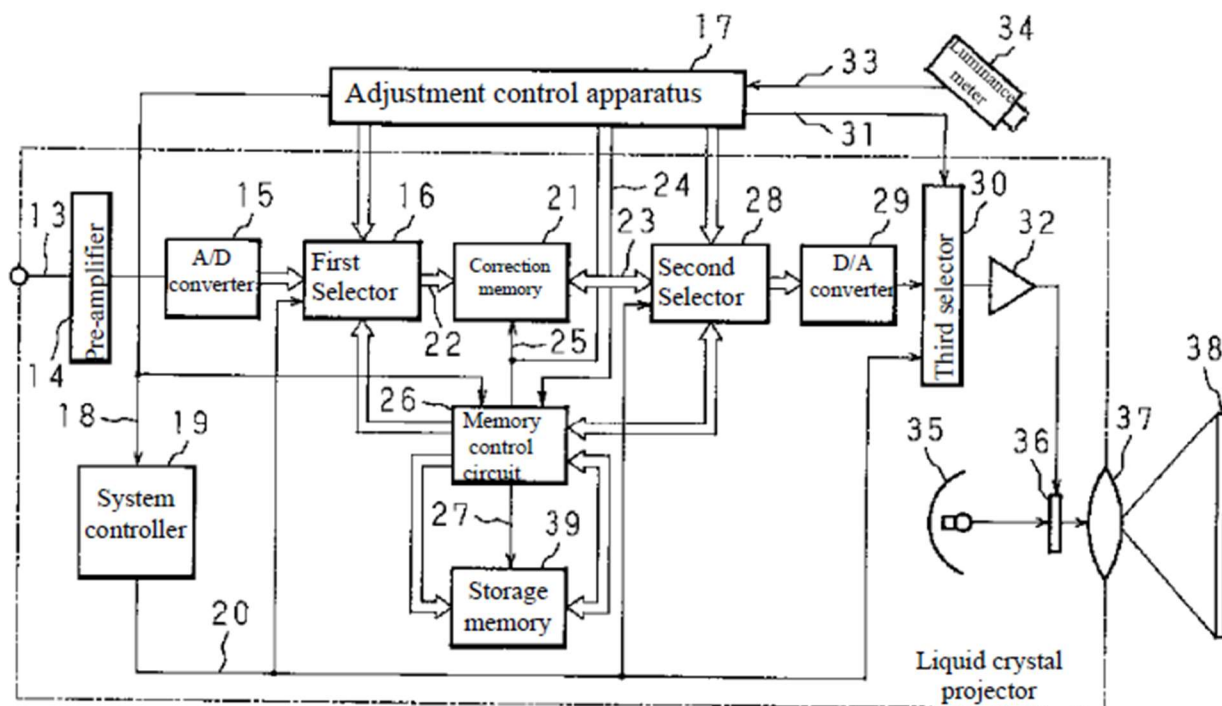
Section III.B. Yet the Petition fails to identify any such control interface in the prior art. Moreover, the term “means for executing a predetermined algorithm according to a predetermined criteria and data sensed by said at least one sensor” properly construed requires a corresponding structure of a “programming interface disclosed in the ’788 Patent configured to perform the algorithms disclosed in the ’788 Patent at 3:16–30, 6:1–31, and 6:65–7:10; and equivalents thereof.” Dkt. 176 at 42. Yet the Petition fails to identify any such programming interface in the prior art.

Thus, because the Petition fails to carry its burden in demonstrating how each and every claim limitation is disclosed or rendered obvious by the prior art, institution should be denied.

C. All Grounds of the Petition Fail Because a POSITA Would Have No Motivation to Modify Any of the Primary References With Kang.

1. The Nonomura + Kang combination.

The Petition asserts that claims 1–3 and 5–6 of the ’788 Patent are obvious under 35 U.S.C. § 103 over Nonomura in view of Kang “and further in view of the knowledge of a POSITA.” Petition at 10. However, Nonomura in view of Kang fails to disclose or render obvious each and every feature of claims 1–3 and 5–6. *See* EX2015 at ¶¶ 38-39.



Nonomura, FIG. 1.

Nonomura is directed to a liquid crystal projector having a gamma correction function. EX1006, title. As shown in Figure 1 of Nonomura, above, the image displayed on LCD panel 36 is projected by light source 35 and enlarged by projection lens 37 for projection onto screen 38. *Id.* at [0020]. Adjustment control apparatus 17 may be connected to luminance meter 34, which measures the luminance of the image on screen 38. *Id.* at [0023].

After measuring the characteristics of the LCD panel 36, the adjustment control apparatus 17 then varies the voltage of DC level voltage signal 31 according to a predetermined sequence while luminance meter 34 captures the

luminance *of the entire screen* is measured for each voltage, returning measurement data 33. *Id.* at [0037]. The data is multiplied by a panel-specific gamma count to derive the applied voltage - transmittance curve for LCD panel 36. *Id.* The actual adjustment is then performed by adjustment control apparatus 17 performing gamma correction corresponding to measurement data 33 that was obtained from luminance meter 34, which previously measured the luminance *of the entire screen*. *Id.* at [0028].

In this respect, Nonomura fails to disclose or render obvious “varying gamma reference voltage levels on columns of said display,” as required by all independent claims of the ’788 Patent. *See* EX2015 at ¶¶ 40–43. Instead, the correction process of Nonomura is directed to measuring the luminescence of an entire projection and performing gamma correction of the entire screen (i.e., not by column) based on measurement data. *Id.* The Petition concedes this fact. Petition at 16 (“To the extent Nonomura fails to disclose ‘on columns of’ said display, Kang does.”). However, even if it is taught by Kang (which Patent Owner does not concede), the Petition fails to articulate a clear motivation that a POSITA would have to make the proposed, specific modification. *See* EX2015 at ¶¶ 43–45.

Regarding the specific motivation a POSITA would have to look to Kang for varying gamma reference voltage levels on columns of the display, the Petition merely states the following:

A POSITA would be motivated to modify Nonomura's systems to vary the gamma reference voltage levels on its columns of the LCD panel 36 in light of the teachings of Kang. Ex. 1003, ¶82.15. Arranging an LCD into columns and rows for accessing individual pixels was well known to a POSITA as of the earliest claimed priority date. Ex. 1003, ¶82.15.

Petition at 17–18.

Petitioner relies upon the Declaration of Rafael J. Betancourt (the “Betancourt Declaration”) which provides only an unsupported and conclusory statement as the sole purported motivation to combine Nonomura with Kang for the “column” limitations of independent claims 3 and 5. EX1003 at ¶ 82 (claim chart of [1C]) (“It is common knowledge in the display industry to arrange an LCD panel into columns and rows for accessing individual pixels, and corresponding row drivers and column drivers are in engineers’ regular toolbox.”). Such “common knowledge,” untethered to the disclosure of the patent, adds virtually nothing to Petitioner’s claim. *See* EX2015 at ¶¶ 43–45.

“The showing of a motivation to combine must be clear and particular, and it must be supported by actual evidence.” *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1334 (Fed. Cir. 2002) (rejecting an accused infringer’s conclusory assertions of a purported motivation to combine two references); *see also Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1362 (Fed. Cir. 2016) (“[O]ur cases

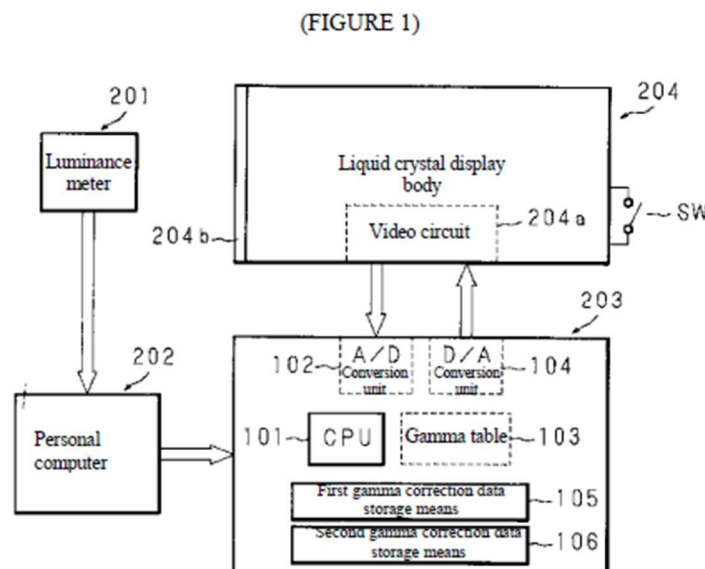
repeatedly warn that references to ‘common sense’ . . . cannot be used as a wholesale substitute for reasoned analysis and evidentiary support.”).

Phenix submits that the Petition has failed to establish a *prima facie* case of obviousness because it does not explain with clarity and particularity why a POSITA would modify Nonomura with Kang to meet the “column” limitations of independent claims 1, 3, and 5. *See* EX2015 at ¶¶ 43–45. Outside of conclusory statements, the Petition merely asserts that “[a]rranging an LCD into columns and rows for accessing individual pixels was well known to a POSITA as of the earliest claimed priority date” (Petition at 17–18) and the Betancourt Declaration merely asserts that “[i]t is common knowledge in the display industry to arrange an LCD panel into columns and rows for accessing individual pixels, and corresponding row drivers and column drivers are in engineers’ regular toolbox.” (EX1003 at ¶ 82 (claim chart of [1C])). Essentially, the Petition hinges solely on the purported common sense/common knowledge of its own expert to supply the alleged motivation to modify Nonomura with the teachings of Kang to meet the “column” limitations of independent claims 1, 3, and 5. The Petition fails to point to any advantages identified in the art to make the purported modifications, nor does the Petition identify any teaching, suggestion, or motivation in the prior art that would have led a POSITA to modify the prior art in the way claimed. *See* EX2015 at ¶¶ 43–45.

Ultimately, the Petitioner's attempt to use common sense/common knowledge as a wholesale substitute for reasoned analysis of a POSITA's motivation to combine for this limitation, which permeates through all independent claims of the '788 Patent, should be rejected. Because this is fatal to the Petition, the Board should deny institution for this reason alone.

2. The Uehara + Kang combination.

In the next Ground, the Petition asserts that claims 1–3 and 5–6 of the '788 Patent are obvious under 35 U.S.C. § 103 over Uehara in view of Kang and further “in view of the knowledge of a POSITA.” Petition at 28. However, this Ground suffers from, among other things, the same fatal flaw as the Petition's combination of Nonomura with Kang. *See* EX2015 at ¶¶ 47–48.



Uehara, FIG. 1.

Uehara is directed to a gamma correction method for a liquid crystal display. EX1009, title. With reference to Figure 1 of Uehara, above, video circuit 204a is built into liquid crystal display body 204, which is also provided with liquid crystal display panel 204b. *Id.* at [0011]. Liquid crystal display panel 204b faces the light incident side of luminance meter 201, ensuring that the light transmittance of liquid crystal display panel 204b can be measured by luminance meter 201. *Id.* The measured output of luminance meter 201 is inputted into personal computer 202. *Id.* The signal that may be outputted from personal computer 202 is inputted into gamma correction circuit 203. *Id.* at [0012]. The signal that is outputted from gamma correction circuit 203 is inputted into liquid crystal display body 204, and the signal that is outputted from liquid crystal display body 204 is inputted into gamma correction circuit 203. *Id.*

The gamma correction procedure of Uehara is described in detail in paragraphs [0021]–[0023]. Importantly, as with the gamma correction procedures of Nonomura, the gamma correction procedure teaches adjusting the gamma reference voltages ***of the entire screen/display***, as opposed to performing gamma correction by columns as required by the independent claims. *Id.* at [0023] (“As a result, liquid crystal panel 204b will change its ***entire surface*** to light transmittance according to the applied voltage.”) (emphasis added); EX2015 at ¶¶ 49–52. For example, Uehara fails to even mention “columns” of a display. The Petition

concedes this. Petition at 36 (“To the extent that Uehara fails to disclose ‘on columns of said display,’ Kang discloses that, as articulated supra in §VII.A.[1C].”).

However, as with the previous Ground, the Petition fails to offer any purported motivation to modify the reference as claimed apart from common knowledge/common sense. Petition at 36 (offering the same single-sentence rationale as the Petition did for the previous Ground, that “[a]rranging an LCD into columns and rows for accessing individual pixels was well known to a POSITA as of the earliest claimed priority date.”); EX1003 at ¶ 89 (claim chart of [1C]) (offering the same single-sentence rationale as the Betancourt Declaration did for the previous Ground, that “[i]t is common knowledge in the display industry to arrange an LCD panel into columns and rows for accessing individual pixels, and corresponding row drivers and column drivers are in engineers’ regular toolbox.”); EX2015 at ¶¶ 49–52.

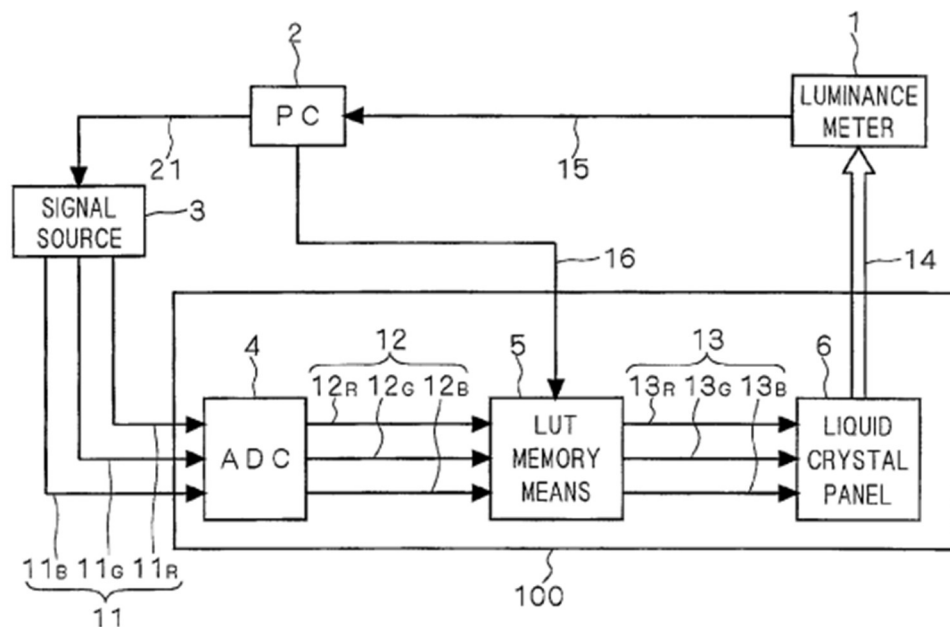
Thus, for the same reasons discussed in Section V.C.1, the Petition has failed to establish a *prima facie* case of obviousness because it does not explain with clarity and particularity why a POSITA would modify Uehara with Kang to meet the “column” limitations of independent claims 1, 3, and 5. *See* EX2015 at ¶¶ 49–52. Solely relying on conclusory allegations from its own expert that it would purportedly be common knowledge, Petitioner fails to point to any advantages

identified in the art to make the purported modifications, nor does the Petition identify any teaching, suggestion, or motivation in the prior art that would have led a POSITA to modify the prior art in the way claimed. *Id.* Because this is fatal to the Petition, the Board should deny institution for this reason alone.

3. The Tobiya + Kang combination.

In the next Ground, the Petition asserts that claims 1 and 3 of the '788 Patent are obvious under 35 U.S.C. § 103 over Tobiya in view of Kang and further “in view of the knowledge of a POSITA.” Petition at 47. However, this Ground suffers from, among other things, the same fatal flaw as the Petition’s combinations of Nonomura/Uehara with Kang. *See* EX2015 at ¶¶ 54–55.

FIG. 1



Tobiya, FIG. 1.

Tobiya is directed to a display characteristic correction system. EX1010, [0036]. With reference to Figure 1 of Tobiya above, the display characteristic correction system is provided with a liquid crystal display 100, and a means for correcting the gray level of the liquid crystal display. *Id.* In order to correct the gray level of the liquid crystal display 100, a signal source 3 generates a group of analog RGB signals 11 corresponding to various gradients, based upon a control signal 21 from a computer (for example, a personal computer: PC) 2 for setting the LUT in the liquid crystal display 100, and gives them to the analog/digital converter 4. *Id.* at [0039]. Moreover, a luminance meter 1 measures the gray level displayed by the liquid crystal panel 6, for example, the luminance 14. *Id.* Data 15 corresponding to the luminance 14 thus measured by the luminance meter 1 is supplied to the computer 2. *Id.* Importantly, as with the gamma correction procedures of Nonomura and Uehara, the gamma correction procedure teaches adjusting the gamma reference voltages *of the entire screen/display*, as opposed to performing gamma correction by columns as required by the independent claims. See EX2015 at ¶¶ 55–59. For example, Tobiya fails to even mention “columns” of a display. The Petition concedes this. Petition at 54 (“To the extent that Tobiya fails to disclose ‘on columns of said display,’ Kang discloses that, as articulated *supra*.”).

However, as with the previous Ground, the Petition fails to offer any purported motivation to modify the reference as claimed apart from common knowledge/common sense. Petition at 54 (offering the same single-sentence rationale as the Petition did for the previous Ground, that “[a]rranging an LCD into columns and rows for accessing individual pixels was well known to a POSITA as of the earliest claimed priority date.”); EX1003 at ¶ 96 (claim chart of limitation [1C]) (offering the same single-sentence rationale as the Betancourt Declaration did for the previous Ground, that “[i]t is common knowledge in the display industry to arrange an LCD panel into columns and rows for accessing individual pixels, and corresponding row drivers and column drivers are in engineers’ regular toolbox.”); EX2015 at ¶¶ 55–59..

Thus, for the same reasons discussed in Sections V.C.1–2, the Petition has failed to establish a *prima facie* case of obviousness because it does not explain with clarity and particularity why a POSITA would modify Tobiya with Kang to meet the “column” limitations of independent claims 1 and 3. *See* EX2015 at ¶¶ 55–59. Solely relying on conclusory allegations from its own expert that it would purportedly be common knowledge, Petitioner fails to point to any advantages identified in the art to make the purported modifications, nor does the Petition identify any teaching, suggestion, or motivation in the prior art that would have led

a POSITA to modify the prior art in the way claimed. *Id.* Because this is fatal to the Petition, the Board should deny institution for this reason alone.

VI. CONCLUSION

For the foregoing reasons, Phenix respectfully requests that the Board deny all grounds of challenge, dismiss the Petition, and decline to institute *inter partes* review.

Dated: September 16, 2025

Respectfully submitted,

/Rodney R. Miller/

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Lead Counsel for Patent Owner

IPR2025-01004

U.S. Patent No. 7,557,788

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that this Preliminary Response complies with the type-volume limitation of 37 C.F.R. § 42.24(b). The word count application of the word processing program used to prepare this Preliminary Response indicates that the Preliminary Response contains 6,283 words.

Dated: September 16, 2025

Respectfully submitted,

/Rodney R. Miller/

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Lead Counsel for Patent Owner

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R § 42.6(e), I hereby certify that a true and correct copy of the foregoing was served on Counsel for Petitioner via filing through the P-TACTS System, as well as by delivering a copy via electronic mail to the following:

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