

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BOE TECHNOLOGY GROUP CO., LTD., BEIJING BOE DISPLAY
TECHNOLOGY CO., and MOTOROLA (WUHAN) MOBILITY
TECHNOLOGIES COMMUNICATION CO., LTD.,

Petitioner,

v.

ELEMENT CAPITAL COMMERCIAL COMPANY PTE. LTD,
Patent Owner.

IPR2023-00808
Patent 8,164,267 B2

Before DAVID C. McKONE, TERRENCE W. McMILLIN, and
RUSSELL E. CASS, *Administrative Patent Judges*.

CASS, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

BOE Technology Group Co., Ltd., Beijing BOE Display Technology Co., and Motorola (Wuhan) Mobility Technologies Communication Co., Ltd. (collectively, “Petitioner”) filed a Petition requesting an *inter partes* review of claim 1 of U.S. Patent No. 8,164,267 B2 (Ex. 1001, “the ’267 patent”). Paper 4, 1 (“Pet.”). Element Capital Commercial Company PTE. LTD (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”).

An *inter partes* review may not be instituted unless it is determined that “the information presented in the petition filed under section 311 and any response filed under 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 (2018); *see also* 37 C.F.R. § 42.4(a) (2021) (“The Board institutes the trial on behalf of the Director.”). The reasonable likelihood standard is “a higher standard than mere notice pleading,” but “lower than the ‘preponderance’ standard to prevail in a final written decision.” *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential).

For the reasons provided below and based on the record before us, we determine that it is appropriate for us to exercise our discretion under 35 U.S.C. § 314(a) to deny institution in this proceeding. Accordingly, we do not institute an *inter partes* review based on the Petition.

B. Real Parties in Interest

Petitioner states that the real parties in interest are BOE Technology Group Co., Ltd., Beijing BOE Display Technology Co., and Motorola (Wuhan) Mobility Technologies Communication Co., Ltd. Pet. 1, 91. Patent Owner states that Element Capital Commercial Company PTE. LTD is the real party in interest. Paper 6, 1.

C. Related Proceedings

The parties state that the '267 patent was asserted in *Element Capital Commercial Company PTE. LTD, v. BOE Technology Group Co.*, 2:22-cv-00118-JRG (E.D. Tex.) (the “District Court Litigation”). Pet. 91; Paper 6, 1.

D. The '267 Patent (Ex. 1001)

The '267 patent is directed to a “wiring layout suitable for an electro-optical device.” Ex. 1001, 1:13–14. The '267 patent explains that one type of electro-optical device is an organic electroluminescent (EL) device, which includes a light-emission layer introduced between an anode and a cathode and does not require a backlight. *Id.* at 1:16–23. When forward bias current is supplied between the electrodes, the light-emission layer produces light. *Id.* at 1:23–29. In a conventional color active-matrix-driven display pane, according to the '267 patent, each pixel is disposed between a data line and an electric power line. *Id.* at 1:30–42. Because power consumption varies by pixel color, “the optimal width of the electric power line is greatly different for each color.” *Id.* at 1:51–56. At the same time, however, such conventional displays need to have “the same pixel pitch^[1] due to the

¹ “Pixel pitch” refers to “the distance between adjacent pixels in a display” Ex. 1006 ¶ 58. Having the “same pixel pitch” means that “the pixels should be evenly spaced.” *Id.*

restriction from the manufacturing process for a display,” which can result in a “sacrifice of the aperture ratio^[2].” *Id.* at 1:56–63. Moreover, the ’267 patent explains, reducing the aperture ratio can increase the current that must be supplied to the EL device to obtain a predetermined luminance, requiring power lines having a greater width. *Id.* at 1:63–2:2. Thus, according to the ’267 patent, in conventional wiring layouts “it is difficult to maintain a large aperture ratio while maintaining the electric power line with a suitable width for each color under the condition that the pixel matrix is formed with the same pixel pitch.” *Id.* at 2:3–9.

To address these issues, the ’267 patent provides “a wiring method for electric power lines, wherein the aperture ratio of the pixel can be increased while maintaining a pixel matrix with the same pixel pitch.” Ex. 1001, 2:10–13. In one embodiment, “line forming regions” are disposed between both pixel rows and pixel columns, as shown in Figure 5, reproduced below.

² The “aperture ratio” generally refers to “the ratio of a pixel’s light sensitive area to the pixel’s total area.” Ex. 1006 ¶ 58.

Fig. 5

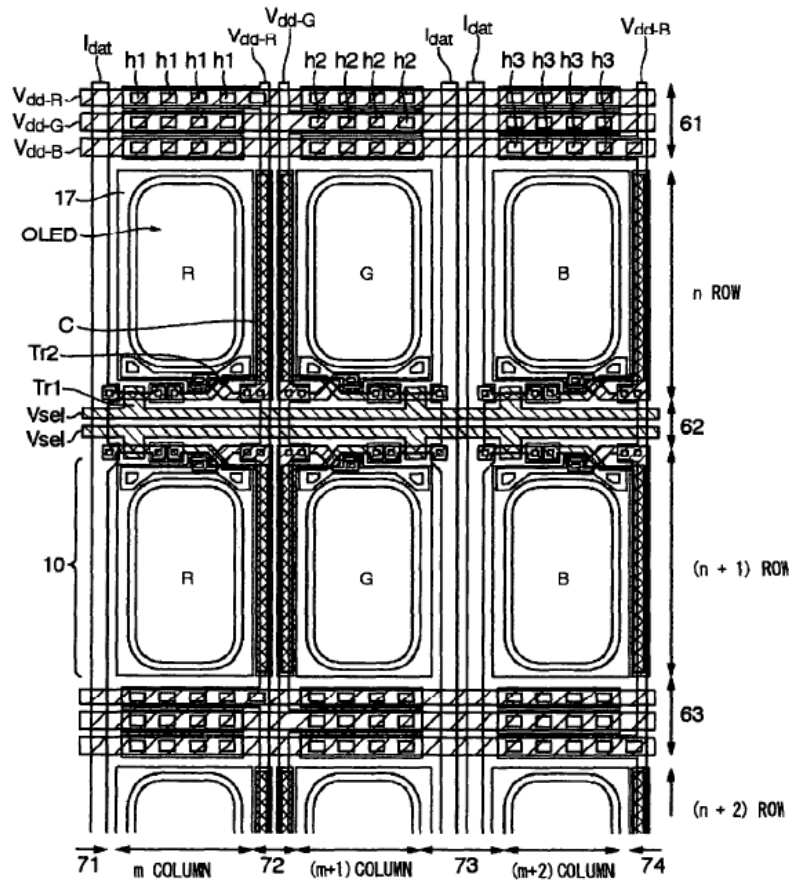


Figure 5 of the '267 patent shows a wiring layout according to one embodiment of the invention. Ex. 1001, 4:34–35.

As shown in Figure 5, this embodiment includes “three combinations of two lines selected from the three [vertically-oriented] electric power lines, V_{dd-} [G], V_{dd-R} , and V_{dd-B} and the three data lines I_{dat} . . . formed between the pixel groups arrayed in the column direction.” Ex. 1001, 8:29–32. For example, I_{dat} combined with the blue electric power line V_{dd-B} ³ can be formed in

³ The '267 patent does not identify the color of the electric power line formed in region 71, and identifies V_{dd-G} as the electric power line formed in region 74. However, these appear to be typographical errors because Figure 5 and the accompanying text suggests that the blue electric power line would be formed in these regions. Ex. 1001, 8:29–50, Fig. 5; Ex. 1006 ¶ 65.

regions 71 and 84, the V_{dd-G} green and V_{dd-R} red power lines may be formed in region 72, and two I_{dat} data lines may be formed in region 73. *Id.* at 8:32–50. This design also includes line-forming region rows that alternate between “three [horizontally-oriented] electric power lines V_{dd-G} , V_{dd-R} , and V_{dd-B} ” and “two scan lines V_{sel} .” *Id.* at 8:12–28. Each of the horizontally-oriented electric power lines connect to their corresponding vertically-oriented electric power lines through multiple contact holes h1, h2, and h3, which provides “the advantage of preventing wiring breakage, and . . . the advantage of reducing wiring resistance.” *Id.* at 8:51–64.

E. Claim 1

Challenged claim 1 is reproduced below.

1. [a] An electro-optical device comprising:
 - [b] a scan line;
 - [c] a data line that intersects the scan line;
 - [d] a first electrode; a second electrode;
 - [e] a light emission layer that is disposed between the first electrode and the second electrode;
 - [f] a first power line that has a first portion extending in a first direction and a second portion extending in a second direction that intersects the first direction;
 - [g] a second power line that extends in the second direction, the second power line overlapping at least a part of the second portion of the first power line; and
 - [h] an inter-layer insulating film that is disposed between the first power line and the second power line,
 - [i] the second portion of the first power line being electrically connected to the second power line through a plurality of contact holes.

Ex. 1001, 10:6–22 (indents and bracketed paragraph identifiers added).

F. Applied References

Petitioner relies upon the following references:

Yamazaki, US 2001/0015618 A1, published August 23, 2001 (Ex. 1008, “Yamazaki”)

Koyama, US 2001/0043168 A1, published November 22, 2001 (Ex. 1010, “Koyama 168”);

Koyama, US 6,124,604, published September 26, 2000 (Ex. 1011, “Koyama 604”);

Koyama, US 2002/0053671 A1, published May 9, 2002 (Ex. 1012, “Koyama 671”).

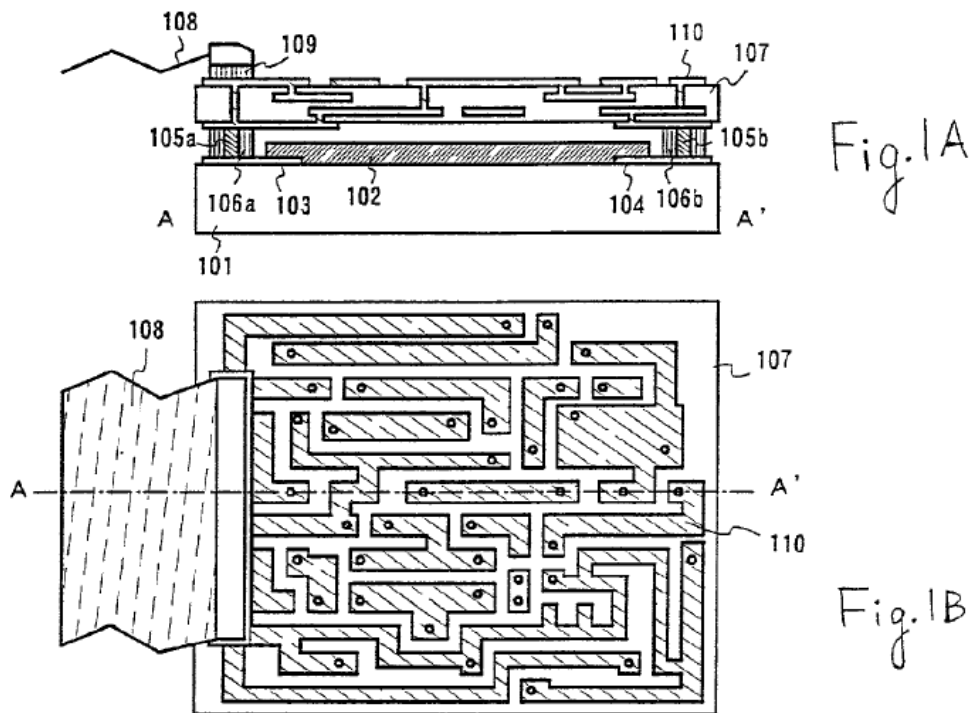
Pet. ii, 1–2. Petitioner submits the Declaration of Dr. David K. Liu. (Ex. 1006). Patent Owner submits the Declaration of Dr. Aris Silzars (Ex. 2001).

1. Overview of Yamazaki (Ex. 1008)

Yamazaki is directed to an EL display device having a luminous element which itself has a light-emitting ability and, unlike a liquid crystal display, does not require a back light. Ex. 1008 ¶ 4. Yamazaki teaches that EL display devices that have a current drive have “a problem of a phenomenon in which a voltage drop (also referred to as an IR drop) caused by a wiring resistance occurs,” which causes the voltage to “become[] lower as its distance from a power source becomes farther.” *Id.* ¶ 5. According to Yamazaki, “[t]his problem is particularly conspicuous when the wiring becomes long,” and is thus “a large obstacle in making the screen of the EL display device larger.” *Id.* Additionally, when the wiring is made of certain materials, the wiring resistance can “reduc[e] the homogeneity of the quality of the image.” *Id.* ¶ 6.

To address this voltage drop problem, Yamazaki discloses a light-emitting device that “is constituted of a substrate having a luminous element

formed thereon (hereinafter referred to as element-forming substrate or a first substrate) and a hardened large printed wiring board (PWB: Printed Wiring Board),” which “are electrically connected by a conductor (anisotropic conductive film or a bump)” which reduces “the resistance of each of the wirings (first group of wirings) formed on the element-formed substrate.” Ex. 1008 ¶ 15. This structure is illustrated in Yamazaki’s Figures 1A and 1B, reproduced below.

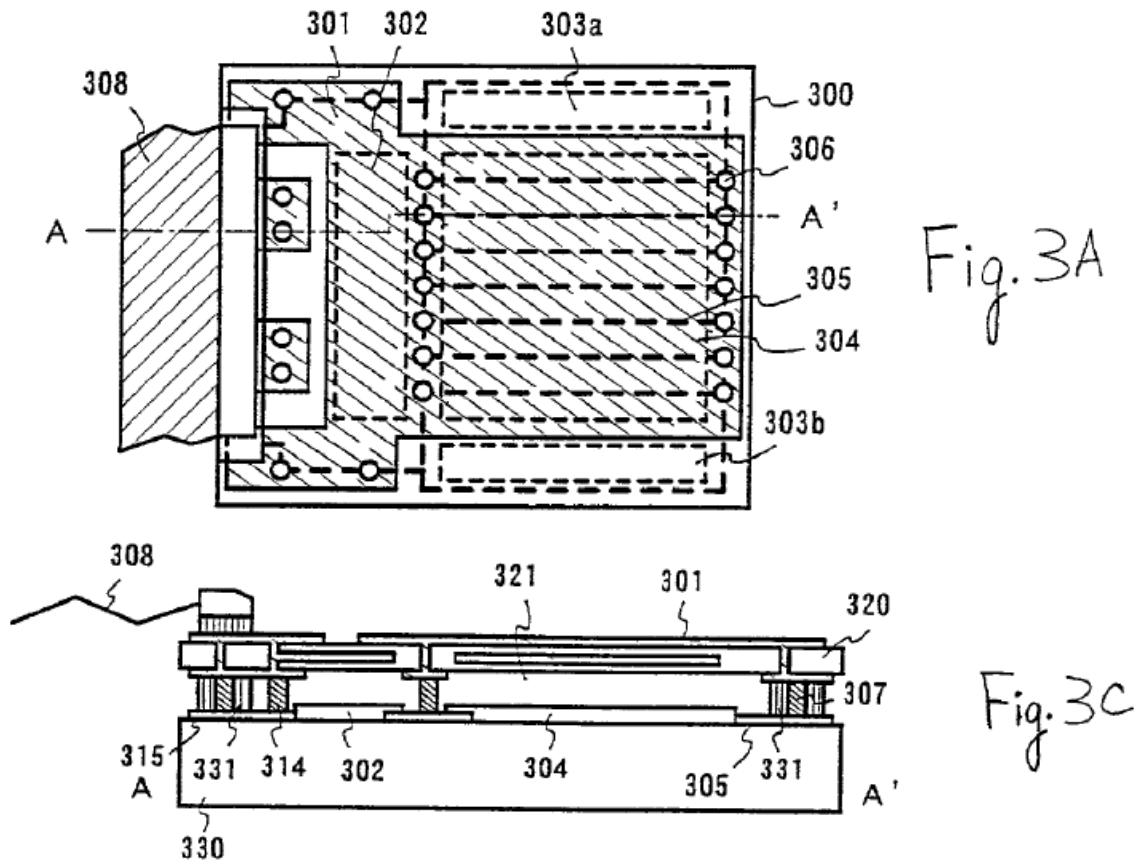


Yamazaki’s Figures 1A and 1B show a cross-sectional structure and a top structure, respectively, of a light emitting device. Ex. 1008 ¶¶ 17, 26.

Yamazaki’s Figure 1A shows substrate 101, luminous element 102, and wirings 103 and 104 formed on substrate 101 for transmitting an electric signal to luminous element 102. Ex. 1008 ¶ 18. Printed wiring board 107 is electrically connected to substrate 101 via conductors 105a and 105b, and sealing agents 106a and 106b bond substrate 101 to printed wiring board 107. *Id.* ¶ 19. As shown in Figure 1B, a flexible printed circuit (FPC) 108 is

attached to a terminal portion of printed wiring board 107, and wiring 110 is formed on printed wiring board 107 (referred to as “PWB side wiring” or the “second group of wirings”). *Id.* ¶ 22. Wiring 110 transmits an electric signal to conductors 105a and 105b via anisotropic conductive film 109. *Id.* Yamazaki explains that, “because the PWB side wiring 110 is made of an extremely low resistant wiring, the voltage drop which originates in the wiring resistance can be immensely suppressed, thereby making it possible to transmit nearly equivalent electric signals to the element side wirings 103 and 104.” *Id.* ¶ 23.

Yamazaki’s EL device is further illustrated in Figures 3A and 3C, reproduced below.



Yamazaki’s Figures 3A and 3C show a top structure and a cross-sectional structure, respectively, of a light emitting device. Ex. 1008 ¶¶ 28, 35–38.

As shown in Figures 3A and 3C, source driver circuit 302, gate driver circuits 303a and 303b, and pixel portion 304, are formed on element-formed substrate 330. Ex. 1008 ¶ 38. The “thick dotted line denoted by reference symbol 305 is a current supply line that is formed on the element-formed substrate 330.” *Id.* First printed wiring board 300 includes wiring 301 “for aiding a current supply line,” referred to as a “current supply auxiliary line,” which is connected to current supply line 105 via contact portion 306 and conductor 307. *Id.* ¶¶ 37–38. The “current supply line is a wiring for supplying a current, which flows to an EL element, and the wiring for aiding the current supply line is a wiring that is connected in parallel to the current supply line in order to reduce the apparent wiring resistance of the current supply line.” *Id.* ¶ 37. “Accordingly,” Yamazaki explains, “it is possible to make the electric potential equal in any position of the current supply line 305, and therefore, the voltage drop of the current supply line 305 can be substantially suppressed” and a “homogenous image” can be displayed. *Id.* ¶¶ 39, 47.

2. Overview of Koyama 168 (Ex. 1010)

Koyama 168 is directed to “an active matrix EL display device that can display a clear multi gray-scale color display to reduce the shift in the potential caused by the potential drop due to the wiring resistance of a power source supply line, in order to decrease the unevenness in a display region.” Ex. 1010, code (57). Koyama 168 explains that such displays feature “power supply lines” that supply “electric potential” to pixels, which cause EL elements in those pixels to emit light. *Id.* ¶¶ 14–23. However, according to Koyama 168, “as the size of the display device becomes larger, the

current consumption increases in proportion to the area of the display.”

Id. ¶ 47.

Koyama 168 addresses this issue by “alleviating potential drop due to wiring resistance of a power supply line, in particular, potential drop due to wiring resistance at a portion where the power supply line is drawn out.”

Id. ¶ 53. Specifically, “[b]y drawing out the power supply lines in two directions of the display device . . . compared with a case where the power supply lines are drawn out in one direction, the length of the wiring from the power supply lines of the pixel portion to the external input terminals can be shorter and the variation in the length of the wiring can be decreased.”

Id. ¶ 133. “By the above structure,” Koyama 168 explains, “the influence of the potential drop at the drawn-around portion of the power supply lines around the pixel portion can be decreased.” *Id.* ¶ 134.

An embodiment of Koyama 168’s device is shown in Figure 3, reproduced below.

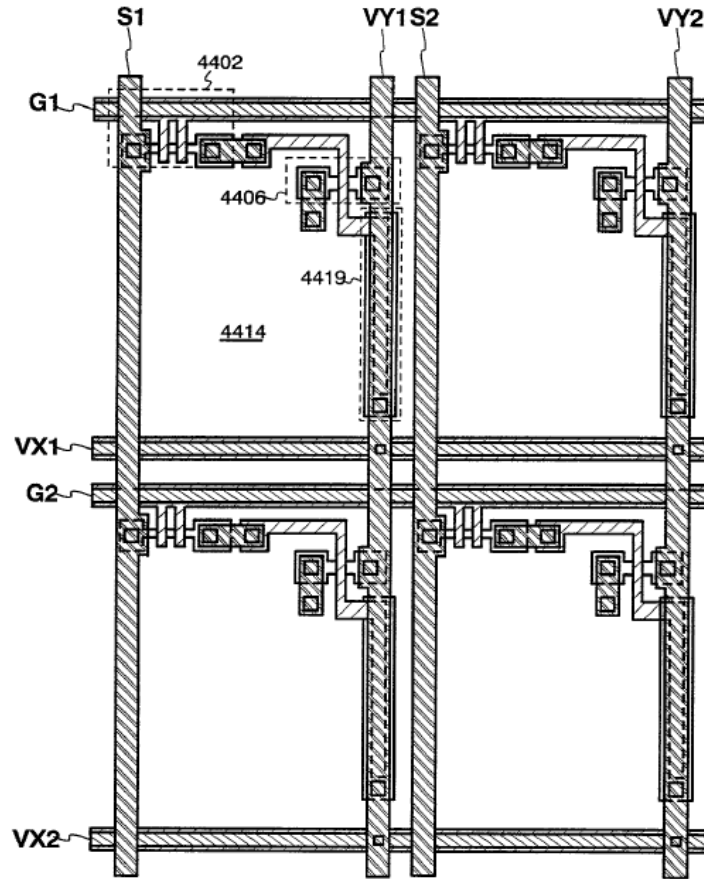


Fig. 3

Figure 3 is a top view of the pixel portion of the display device of Koyama 168. Ex. 1010 ¶¶ 84, 160.

As shown in Figure 3, “[e]ach pixel is formed of a TFT 4402 for switching, a TFT 4406 for driving, a capacitor 4419, and an EL element 4414.”

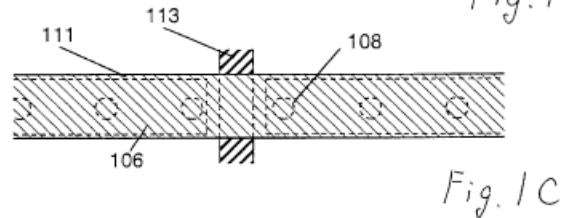
Ex. 1010 ¶ 162. “[P]ower supply lines VX1 and VX2 are disposed in parallel with gate signal lines G1 and G2,” and “are connected through contact holes to conventional power supply lines VY1 and VY2 in parallel with the source signal lines S1 and S2.” *Id.*

3. *Overview of Koyama 604 (Ex. 1011)*

Koyama 604 is directed to “a wiring structure of an integrated circuit that is formed on a substrate having an insulating surface by using thin film transistors” (TFTs), such as used in a “liquid crystal display device.”

Ex. 1011, 1:9–15. Koyama 604 explains that “in both high-temperature polysilicon and low-temperature polysilicon TFTs according to the current technologies, because of low mobility, the driving frequency of such TFTs itself is obliged to be less than several megahertz,” which is less than the “tens of megahertz necessary for display” on a liquid crystal display device. *Id.* at 1:56–65. Accordingly, “a plurality of wiring lines (Interconnections) are used to transmit clock signals or video signals,” and such signals “are supplied to the TFTs in such a manner as to be reduced in frequency.” *Id.* at 1:66–2:3. Koyama 604 further explains that, although the inventors previously developed TFTs that could accommodate higher-frequency signals, those signals could become “rounded” when the TFTs were formed over a large area. *Id.* at 2:9–4:21.

Koyama 604 addresses this problem by using a technique to “reduce, without increasing the capacitance, the electric resistance of wiring lines to which a high-frequency signal of several megahertz to tens of megahertz or an even higher frequency” is applied. Ex. 1011, 4:56–64. Specifically, “at least part of at least one of wiring lines that are connected to the circuit and/or wiring lines in the circuit is electrically connected in parallel to an auxiliary wiring line that is provided with an interlayer insulating film interposed in between.” *Id.* at 5:3–7. This technique is illustrated in Figures 1A–1C, reproduced below:



Figures 1A–1C show an exemplary structure of a semiconductor device according to the invention of Koyama 604. Ex. 1011, 5:32–33.

As shown in Figures 1A–1C, “a wiring line 111 is connected in parallel to an auxiliary wiring line 106 via a plurality of contact holes 108 that are formed through the interlayer insulating film 107.” Ex. 1011, 5:55–58. Auxiliary wiring line 106 is provided in the same layer as gate electrode 106. *Id.* at 5:60–62. “Further,” Koyama 604 explains, “a two-layer structure is established in such a manner that the wiring line 111 is electrically connected in parallel to the auxiliary wiring line 106 via the plurality of contact holes 108 formed in the interlayer insulating film along the longitudinal direction of the wiring line 111.” *Id.* at 5:62–67. Additionally, according to Koyama 604, “[a]s the number of contact holes 108 for connecting the wiring line 111 and the auxiliary wiring line 106 increases,

the electrical connection between the wiring line 111 and the auxiliary wiring line 106 becomes better” and “the electric resistance of the combination of the wiring line 111 and the auxiliary wiring line 106 decreases.” *Id.* at 6:16–22.

4. *Overview of Koyama 671 (Ex. 1012)*

Koyama 671 is directed to a semiconductor image display device having an analog buffer circuit composed of TFTs (thin film transistors) including polycrystalline semiconductor layers. Ex. 1012 ¶ 2. Electronic displays use such circuits to buffer signals from the “source signal line driver circuit” to “reduce the influence of round[ing] of a signal due to the load.” *Id.* ¶¶ 19–20. Koyama 671 discloses an embodiment modeling how the circuit would be manufactured in Figure 13, reproduced below.

Fig. 13

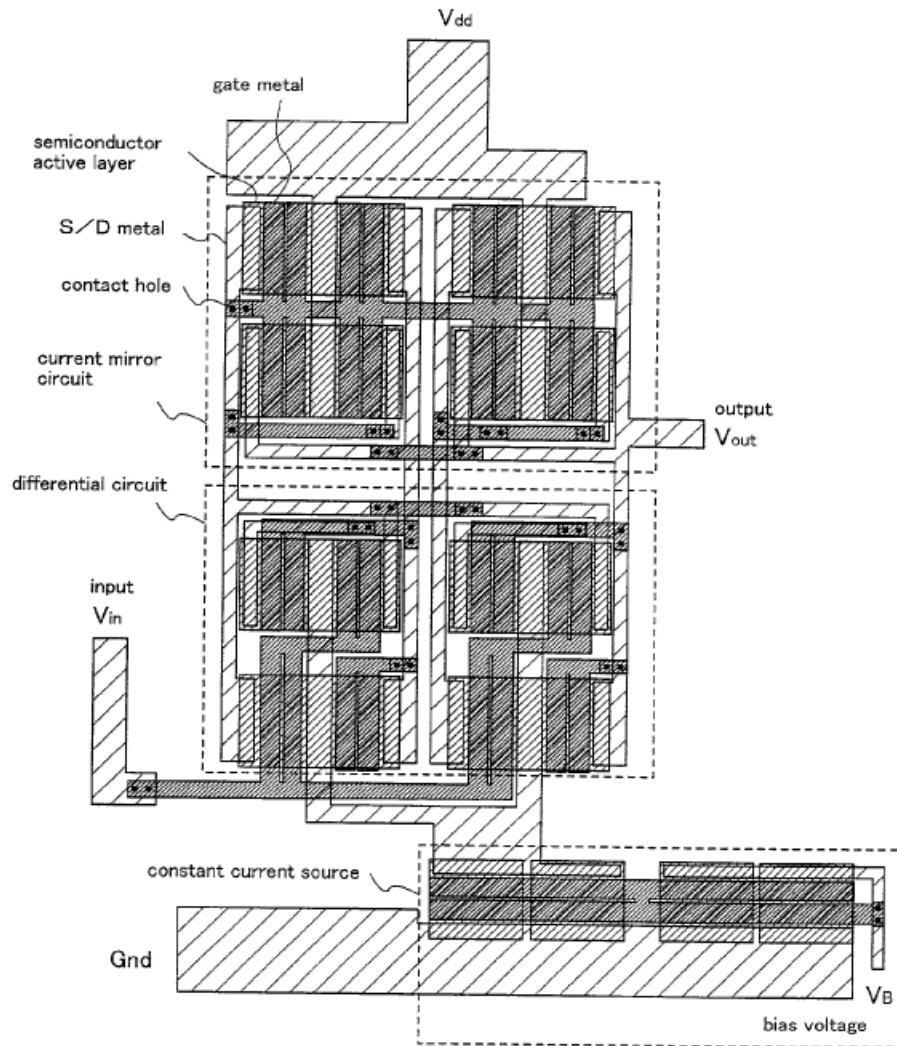


Figure 13 of Koyama 671 is a plan view of an analog buffer circuit according to an embodiment of the invention. Ex. 1012 ¶¶ 84, 169–193, Fig. 13.

As shown in Figure 13, the analog buffer circuit includes a current mirror circuit, a differential circuit, an input V_{in} , an output V_{out} , an S/D metal layer, a gate layer, a semiconductor active layer, a power source line V_{dd} , and various contact holes. Ex. 1012 ¶¶ 84, 169–193, Fig. 13.

G. Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claim 1 of the '267 patent on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1	102/103(a)	Yamazaki
1	103(a)	Koyama 168, Koyama 604, Koyama 671

Pet. 1.

II. DISCUSSION

Patent Owner asserts that institution should be denied under 35 U.S.C. § 314(a), in deference to the District Court Litigation, because “institution would be an inefficient duplication of a parallel district court litigation in which the same grounds of invalidity are being raised by Petitioners.” Prelim. Resp. 59.

Under 35 U.S.C. § 314(a), the Director has discretion to deny institution of review. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question whether to institute review.” (emphasis omitted)); *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.”); *Harmonic Inc. 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.”).

One instance when the Board considers exercising this discretion is when there is an early trial date in related litigation, which the Board considers as part of assessing all relevant circumstances, including the

merits, to balance considerations such as system efficiency, fairness, and patent quality. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv* Order”); *NHK Spring Co. v. Intri-Plex Technologies, Inc.*, IPR2018-00752, Paper 8 at 19–20 (PTAB Sept. 12, 2018) (precedential). The Board evaluates the following six factors when making this assessment:

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

On June 21, 2022, the Director issued an Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings With Parallel District Court Litigation (the “Interim *Fintiv* Guidance”).⁴ The Interim *Fintiv* Guidance provides “several clarifications” to “the PTAB’s current application of *Fintiv* to discretionary denial where there is parallel litigation”

⁴ The Interim *Fintiv* Guidance is available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf.

based on comments received from stakeholders in response to a Request for Comments (RFC). Interim *Fintiv* Guidance 2.

We consider each of the *Fintiv* factors in light of the Interim *Fintiv* Guidance. We then weigh the factors together and decide, in this case, that it is appropriate to exercise our discretion to deny institution based on the status of the co-pending District Court Litigation.

1. Factor 1: whether a stay exists or is likely to be granted if a proceeding is instituted

Patent Owner argues factor 1 weighs against institution because “[t]he District Court has not instituted a stay, the Petitioners have not filed a motion to stay the District Court litigation, and there is no evidence that a stay would be granted if this IPR proceeding is instituted.” Prelim. Res. 60. Petitioner argues that “[n]o motion to stay has been filed, so the Board should not infer the outcome and this factor is neutral.” Pet. 89.

Under the present circumstances, and on the record presented, we decline to speculate on the likelihood of how the District Court may rule on a future motion to stay. Accordingly, we find that this factor is neutral.

2. Factor 2: proximity of the court’s trial date to the Board’s projected statutory deadline

The Interim *Fintiv* Guidance states that, when applying *Fintiv* factor two, “the PTAB has generally weighed this factor in favor of exercising discretion to deny institution if the trial date is scheduled before the projected statutory deadline for a final written decision.” Interim *Fintiv* Guidance, 8. The Guidance also provides that “[p]arties may present evidence regarding the most recent statistics on median time-to-trial for civil actions in the district court in which the parallel litigation resides for the PTAB’s consideration.” *Id.* at 8–9.

The parties agree that the District Court has set a date for jury selection of May 20, 2024. Pet. 89; Prelim. Resp. 60; Ex. 1016. Petitioner, however, argues that “[t]rial will likely be significantly delayed from that date.” Pet. 89. According to Petitioner, “[t]he median time from filing to trial in the Eastern District of Texas is ordinarily 24.5 months, and that estimate applied to this case would suggest trial to take place in April 2024 since the Patent Owner filed the complaint on April 18, 2022.” *Id.* (citing Ex. 1015). “Here, however,” Petitioner asserts, “Patent Owner did not *serve* the complaint on Petitioner until about five months later, on September 27, 2022.” Pet. 89. Petitioner also contends that “[t]he normal deadlines in the case have had concomitant delays,” as indicated by the fact that the docket control order in the District Court litigation “did not issue until February 3, 2023—about ten months after the answer was filed.” *Id.* (citing Ex. 1016). Thus, Petitioner contends, “the median time to trial should be judged from the date of complaint service” instead of “the date of complaint filing,” which “would place trial in October 2024 shortly after or around the same time as the expected Final Written Decision Deadline.” *Id.* at 89–90.

Patent Owner responds that Petitioner has not “provided any evidence related to the Federal Court management statistics” to support its contention that “the median time to trial should be measured from the date of service of the Complaint, instead of the date of filing of the Complaint.” Prelim. Resp. 62. To the contrary, Patent Owner submits “a document from uscourts.gov that explains terms of the Federal Court management statistics,” which “states that statistics on median time to trial is measured from the ‘date a case was filed.’” *Id.* at 62–63 (citing Ex. 2004, 2). “Moreover,” Patent Owner argues, “the most recent Federal Court

management statistics indicate that, in the latest 12-month period ending on March 31, 2023, the median time from filing to trial in the Eastern District of Texas is 19.0 months, not 24.5 months as contended by the Petitioners.” *Id.* at 63 (citing Ex. 2003, 35). Thus, Patent Owner contends, “even if the median time to trial is measured from the service date of the complaint of September 27, 2022, as erroneously contended by the Petitioners, instead of correctly from the filing date of April 18, 2022, the estimated trial start date would be April 2024 based on the most recent statistical data of median time (19.0 months).” *Id.* This date, according to Patent Owner “is still a month before the currently scheduled trial start date of May 20, 2024, nearly seven months before the Final Written Decision deadline of November 17, 2024.” *Id.*

Patent Owner further argues that the parties jointly agreed to entry of a proposed docket control order in the District Court setting a date for jury selection of May 2024 even after the date of actual service of the Complaint. Pet. 63–64. Thus, according to Patent Owner, because the parties and the District Court “established that May 20, 2024 was a suitable date to start trial, and because no material delay has occurred after filing of the proposed docket control order and entering of the docket control order, there is further no evidence that the trial date of May 20, 2024, will be moved to a later date.” *Id.* at 64.

Considering the arguments and evidence presented by the parties in light of the present record, we find that *Fintiv* factor 2 weighs in favor of exercising discretion to deny institution. As noted above, the District Court has set a trial date of May 20, 2024, which is about six months before the November 17, 2024, deadline for a final written decision in this IPR. As

explained above, the Interim *Fintiv* Guidance provides that the parties may also present the most recent statistics on median time-to-trial for civil actions in the relevant district court. Interim *Fintiv* Guidance, 8–9. Here, the “most recent statistics” for the Eastern District of Texas are those from the 12-month period ending on March 31, 2023⁵, which reports a median time from filing to trial of 19.0 months. Ex. 2003, 35. Applying this median time-to-trial period to the Complaint’s filing date of April 18, 2022, would put the estimated trial date in November 2023, well before the scheduled trial date of May 20, 2024. Even if we use the September 27, 2022, date of service, as Petitioner proposes, the result would be an estimated trial date of April 27, 2024, which is still before the scheduled trial date of May 20, 2024.

Therefore, even after taking the delay between filing and service into account, the estimated trial date is approximately 6 months before the deadline for a final written decision in this case. Accordingly, this factor weighs in favor of exercising discretion to deny institution.

3. *Factor 3: investment in the parallel proceeding by the court and parties*

Petitioner argues that the District Court Litigation “is in its early stages, and investment has been minimal.” Pet. 90. According to Petitioner, “[c]laim construction has not occurred; fact discovery will not close until December 1, 2023; [and] expert discovery has not begun and will not close until February 5, 2024.” *Id.* (citing Ex. 1016). “Thus,” Petitioner contends, “Factor 3 weighs in favor of institution.” *Id.*

⁵ The complaint in the District Court Litigation was filed on April 18, 2022, which is within the 12-month period ending on March 31, 2023. Ex. 1015.

Patent Owner argues that the parties and the district court “have already spent and will continue to spend significant resources on litigating the ’267 Patent at and/or around the time of the institution decision.” Prelim. Resp. 65. According to Patent Owner, “[d]iscovery is on-going in the District Court litigation, with both parties having already exchanged document requests and interrogatories.” *Id.* “Additionally,” Patent Owner contends, “infringement and invalidity contentions have been exchanged, and proposed claim terms for claim construction have been exchanged.” *Id.* Furthermore, Patent Owner argues, by the projected institution date “the exchange of claim construction briefs between the Patent Owner and the Petitioners should be completed,” and “the District Court should have conducted the Markman Hearing on November 7, 2023.” *Id.* (citing Ex. 1016).

Here, we find that significant progress has been made in the District Court Litigation and the parties and the District Court have invested substantial resources in that litigation. Significant discovery has been completed, including the exchange of infringement and invalidity contentions, document requests and interrogatories, and proposed claim terms for construction, and the December 1 date for the close of fact discovery is near. The parties have also submitted a Joint Claim Construction and Prehearing Statement in the District Court Litigation informing the District Court that they “have resolved all initially-disputed constructions,” that “there are no disputed claim terms remaining,” and that they “do not believe that a Claim Construction Hearing is necessary, given the lack of disputed terms.” Ex. 3001, 2. In response to this submission, the District Court issued an order cancelling the claim construction hearing.

Ex. 3002. Therefore, the claim construction phase of the District Court Litigation is now completed. Consequently, we find that this factor weighs in favor of exercising discretion to deny institution.

4. *Factor 4: overlap between issues raised in the petition and in the parallel proceeding*

With respect to factor 4, Petitioner represents that, “[i]f the Board institutes trial, Petitioner will cease asserting in the district court any invalidity contention based on the prior art presented in this petition that constitutes part of a ground.” Pet. 90. Therefore, Petitioner contends, “[i]nstitution will not result in overlapping consideration of invalidity arguments.” *Id.*

Patent Owner argues that “[i]ssues related to the ’267 Patent are being litigated in the parallel District Court litigation,” and “Petitioners already set forth the grounds raised in this Petition in their invalidity contentions.” Prelim. Resp. 66. “Additionally,” Patent Owner contends, “Petitioners refuse to mitigate concerns of potentially conflicting decisions and duplicative efforts by failing to submit a stipulation in the District Court proceedings or elsewhere per *Sotera Wireless, Inc. v. Masimo Corp.*, IPR202-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential).” *Id.*

Under *Fintiv* factor 4, “if the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding, this fact has favored denial.” *Fintiv* Order, at 12. This factor addresses “concerns of inefficiency and the possibility of conflicting decisions” when the same issues and arguments are concurrently addressed in two different forums. *Id.*; *see also Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 11 (PTAB Jun. 16, 2020) (informative). Such

concerns are mitigated when a petitioner agrees not to pursue in the parallel proceeding the grounds it is pursuing in its petition. *See Sand Revolution*, Paper 24 at 11. The breadth of such a stipulation affects the weight it is given in the discretionary denial analysis. *Id.* at 12 n.5. For example, in *Sand Revolution*, the Board found that “this factor weighs marginally in favor of not exercising discretion to deny institution” when the petitioner stipulates not to pursue in district court the same grounds presented in its petition. *Id.* at 11–12. But in *Sotera*, the Board explained “this factor weighs strongly in favor of not exercising discretion to deny institution” when the petitioner stipulates not to pursue in the parallel district court case “any ground raised or that could have been reasonably raised” in the IPR. *Id.* at 18–19. Additionally, the Interim *Fintiv* Guidance provides that “the PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents” a *Sotera* stipulation. Interim *Fintiv* Guidance at 3, 7–8.

Petitioner’s representation here that it “will cease asserting in the district court any invalidity contention based on the prior art presented in this petitioner that constitutes part of a ground” is intermediate in scope between the stipulations at issue in *Sand Revolution* and *Sotera*. It goes beyond the stipulation in *Sand Revolution* by covering not only the grounds asserted in this IPR but also the prior art included in those grounds. We find that Petitioner’s representation mitigates against duplicative arguments in the District Court and this IPR, and therefore weighs against exercising discretion to deny institution. However, we note that Petitioner’s representation is narrower than a *Sotera* stipulation because it does not cover “any ground raised or that could have been reasonably raised” in the IPR.

Sotera at 18–19. As a result, the provision in the Interim *Fintiv* Guidance that the Board will not discretionarily deny institution when a *Sotera* stipulation is submitted does not apply here. *See* Interim *Fintiv* Guidance at 3, 7–8.

5. *Factor 5: whether the petitioner and the defendant in the parallel proceeding are the same party*

The parties agree that Petitioner is also a party in the District Court Litigation. Pet. 90; Prelim. Resp. 67. Therefore, this factor weighs in favor of exercising discretion to deny institution. *See Fintiv* Order at 13–14.

6. *Factor 6: other circumstances that impact the Board’s exercise of discretion, including the merits*

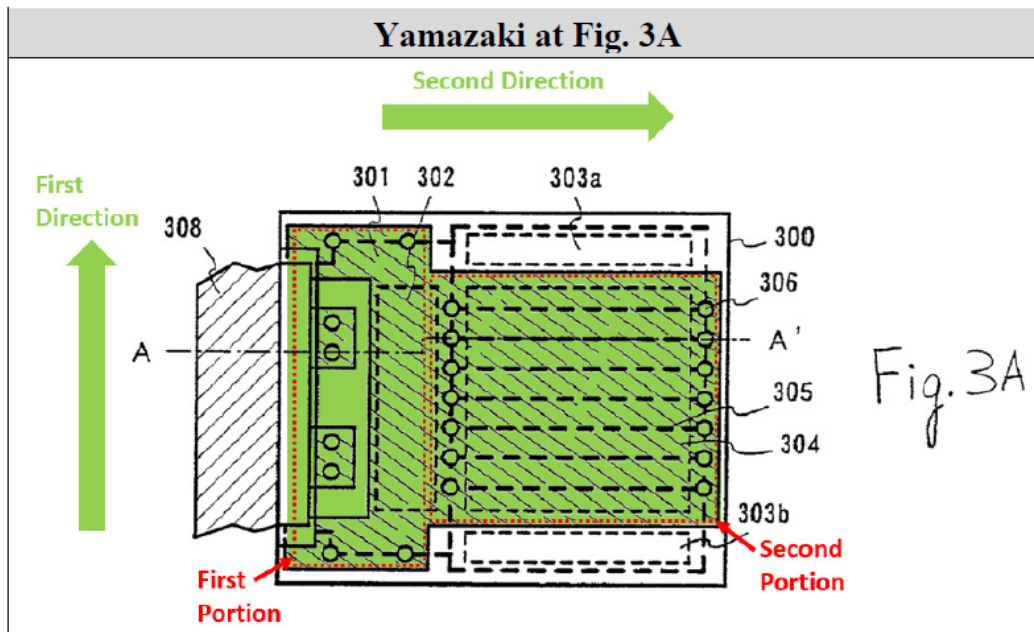
The merits of the petition’s challenges are part of the “balanced assessment of all the relevant circumstances” the Board undertakes in the *Fintiv* discretionary denial analysis. *Fintiv* Order, at 14–16. The Interim *Fintiv* Guidance also provides that “compelling, meritorious challenges will be allowed to proceed at the PTAB even where district court litigation is proceeding in parallel.” Interim *Fintiv* Guidance at 4. The Guidance defines “[c]ompelling, meritorious challenges” as “those in which the evidence, if unrebutted at trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” *Id.*; *see CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23, 3 (PTAB Feb. 27, 2023) (precedential). In *CommScope*, the USPTO Director further explained that “[a] challenge can only ‘plainly lead to a conclusion that one or more claims are unpatentable’ if it is highly likely that the petitioner would prevail with respect to at least one challenged claim.” *CommScope* at 3–4 (quoting *OpenSky Indus., LLC v. VLSI Tech. LLC*, IPR2021-01064, Paper 102, 49 (PTAB Oct. 4, 2022) (precedential)).

According to *CommScope*, we should only reach the compelling merits analysis if we first determine that the first five *Fintiv* factors favor discretionary denial. *CommScope* at 4.

Thus, in circumstances where the Board determines that the other *Fintiv* factors 1–5 do not favor discretionary denial, the Board shall decline to discretionarily deny under *Fintiv* without reaching the compelling merits analysis. In circumstances where, however, the Board’s analysis of *Fintiv* factors 1–5 favors denial of institution, the Board shall then assess compelling merits.

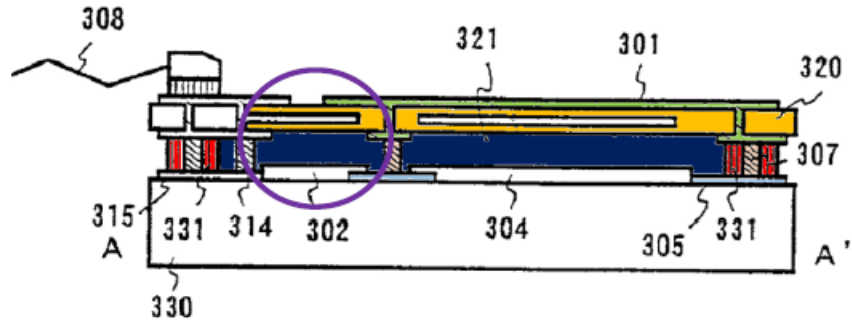
Id. at 4–5. In this case, *Fintiv* factors 1–5 favor denial for the reasons expressed in the conclusion section below. Thus, we address whether the merits of Petitioner’s case are compelling.

Based on the present record, we do not find that Petitioner has presented “compelling, meritorious challenges” to claim 1. For both Grounds 1 and 2, Patent Owner argues that the prior art fails to disclose or suggest “a first power line that has a first portion extending in a first direction and a second portion extending in a second direction that intersects the first direction,” as required by claim 1. With respect to Ground 1, Patent Owner argues that Yamazaki discloses a “first power line” in the form of “current supply auxiliary line” 301 (green) that has a first portion extending in a vertical (first) direction and a second portion extending in a horizontal (second) direction, as shown in Petitioner’s annotated version of Yamazaki’s Figure 3A, reproduced below.



Petitioner’s annotated version of Yamazaki’s Figure 3A showing what Petitioner contends are the first and second portions and first and second directions of the first power line (green). Pet. 38–40; *see id.* at 23–24.

Patent Owner responds that the polygon region annotated by Petitioner in green “covers all of the pixel array 304 and more” and thus is not a “contiguous wire or ‘power line’ that stretches across the entirety of a display region of a television.” Prelim. Resp. 28–29. Additionally, according to Patent Owner, “the polygon region for the auxiliary lines 301 in Fig. 3A is not a depiction of the actual geometry, number, interconnectivity, etc., of the auxiliary lines 301” and, in particular, “is not one contiguous wire.” Prelim. Resp. 31, 39 (citing Ex. 2001 ¶¶ 93, 103). Patent Owner illustrates this argument using an annotated version of Yamazaki’s Figure 3C, reproduced below.



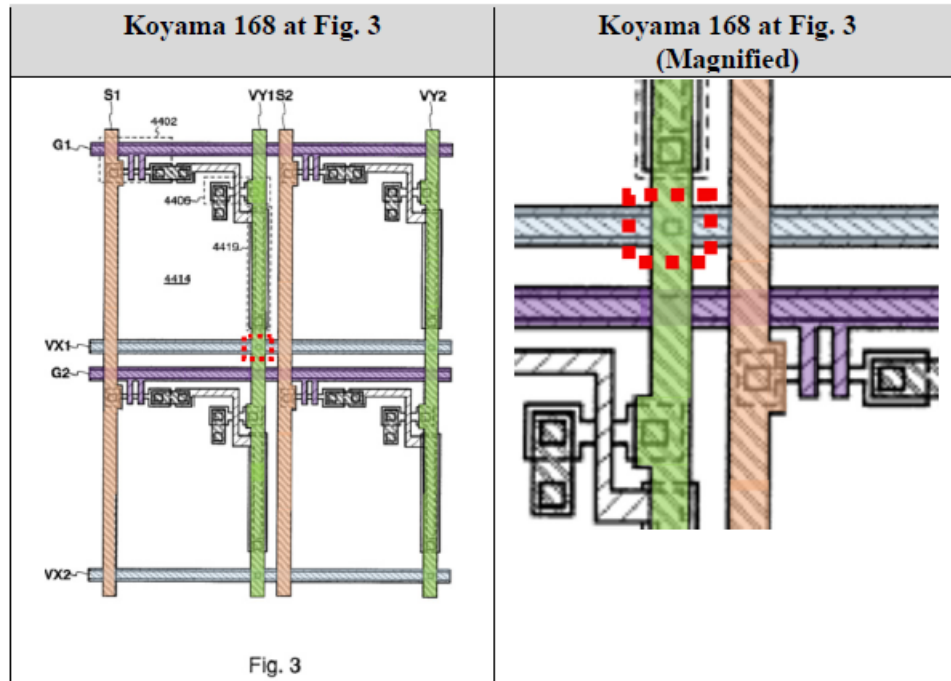
Patent Owner's annotated version of Yamazaki's Figure 3C showing a cross-sectional structure of Yamazaki's light-emitting device taken along the line defined by references A and A' in Figure 3A. Prelim. Resp. 31.

As Patent Owner explains, the annotated Figure 3C above shows a cross-section taken along the line defined by A and A' in Figure 3A, and includes auxiliary line 301, and current supply line 305. Prelim. Resp. 31. Patent Owner also shows in the purple circle how auxiliary line 301 (green) has a break and therefore is not continuous across line A–A', which Petitioner identifies as the “first portion” of auxiliary line 301. *Id.* Thus, according to Patent Owner, Figure 3A does not show “[h]ow these auxiliary lines 301 are arranged and in what directions they each extend.” *Id.* at 32 (citing Ex. 2001 ¶ 93). Patent Owner supports these arguments with detailed testimony from Dr. Silzars. Ex. 2001 ¶¶ 78–103.

In light of Patent Owner's arguments and evidence, we find that Ground 1 does not present a “compelling, meritorious challenge” that “would plainly lead to a conclusion” that claim 1 is unpatentable by a preponderance of the evidence, nor has Petitioner established that it is “highly likely” to prevail. *See Interim Fintiv Guidance* at 4. In particular, Petitioner does not show the structure of auxiliary lines 301, and Patent Owner introduces credible evidence that this structure is not a continuous line extending in a horizontal (second) direction. Petitioner also does not include sufficient detail in its analysis to show how this undefined structure

of auxiliary lines 301 constitutes a “first power line” with “a second portion extending in a second direction that intersects the first direction,” as claim 1 requires, particularly in light of Patent Owner’s showing that the portion defined by A–A’ in Figures 3A and 3C does not form a continuous line.

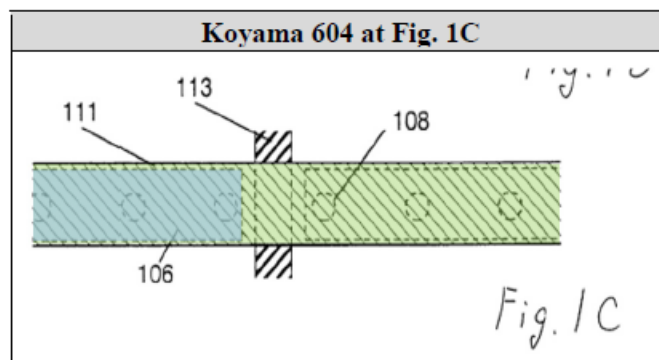
We now turn to Petitioner’s Ground 2 based on the Koyama references. Petitioner relies on the disclosure in Figure 3 of Koyama 168 showing two power lines VX1 and VY1 extending in two directions with a contact hole connecting them, as shown in Petitioner’s annotated version of Figure 3 reproduced below.



Petitioner’s annotated version of Figure 3 of Koyama 168 showing vertical power lines VX and horizontal power lines VY with a contact hole connecting them at each intersection. Pet. 59–60.

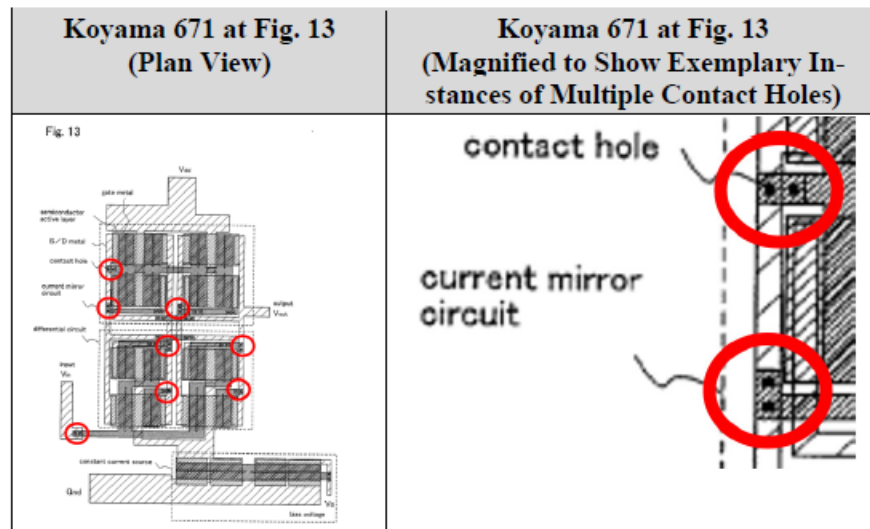
Petitioner argues that it would have been obvious to combine Koyama 168 with Koyama 604, which teaches that adding more contact holes improves the electrical connection between the lines and decreases electric resistance. Pet. 58 (citing Ex. 1011, 6:16–23). In light of this teaching,

Petitioner asserts, it would have been obvious to increase the number of contact holes in Koyama 168. *Id.* at 57–62. To implement this modification, Petitioner points to Koyama 604’s design featuring “a protrusion of ‘wiring line 111’ (in green) over ‘auxiliary wiring line 106’ (in blue) to accommodate a plurality of contact holes 108,” as shown by Petitioner’s annotated version of Figure 1C of Koyama 604, reproduced below. *Id.* at 61.



Petitioner’s annotated version of Figure 1C of Koyama 604 showing wiring line 111 (green) over auxiliary wiring line 106 (blue) to accommodate a plurality of contact holes 108. Pet. 60–61.

Petitioner then combines these references with Koyama 671 to “provide[] further confirmation that having a power line protrusion would have been an obvious solution for creating enough overlap to accommodate multiple contact holes.” Pet. 61. Petitioner provides an annotated version of Figure 13 of Koyama 671 showing such “protrusions,” reproduced below.



Petitioner's annotated version of Figure 13 of Koyama 671 showing protrusions with multiple contact holes circled in red. Pet. 61–62.

In response, Patent Owner argues that Petitioner fails to provide sufficient motivation to combine the Koyama references as proposed. Prelim. Resp. 41–57. First, Patent Owner argues that Petitioner fails to address Koyama 168's teaching that it is necessary to decrease the length of the power lines in order to reduce wiring resistance, and therefore one of ordinary skill would not have been motivated to modify Koyama 168 to increase the length of the power lines by adding protrusions, which would increase wiring resistance. Prelim. Resp. 41, 43–44 (citing Ex. 1010 ¶ 156; Ex. 2010 ¶ 111), 47–50. Patent Owner also argues that one of ordinary skill would not have looked to Koyama 604 or 671 to modify Koyama 168 because: (1) Koyama 604 relates to LCD technology rather than the active-matrix OLED display devices of Koyama 168; (2) Koyama 168 is directed to solving problems associated with wiring configuration of power supply lines, while Koyama 604 is directed to solving problems associated with data lines and scanning lines of a semiconductor device; (3) Koyama 671 is directed to analog buffer circuits of a semiconductor device while Koyama

168 is directed to wiring configurations for the power supply lines for supplying current to pixels; (4) Koyama 671 does not describe utilizing its contact holes for reducing wiring resistance, but rather is directed to solving problems of varying TFTs in an analog buffer circuit. Prelim. Resp. 50–55.

Patent Owner further argues that Koyama 604 describes connecting data or scanning lines in parallel to an auxiliary wiring line, rather than having a first line with portions extending in first and second directions. Prelim. Resp. 55–56. Additionally, Patent Owner argues that Koyama 671’s contact holes are used for bonding components of an analog buffer circuit in a semiconductor device, rather than connecting different power supply lines to each other in order to reduce resistance. *Id.* at 56–57. Thus, Patent Owner contends, Koyama is not directed to a protrusion on a **power line** for accommodating multiple contact holes on the protrusion. *Id.* at 57. Patent Owner supports these arguments with detailed testimony from Dr. Silzars. Ex. 2001 ¶¶ 104–145.

Based on the present record, we find that Ground 2 does not present a “compelling, meritorious challenge” that “would plainly lead to a conclusion” that claim 1 is unpatentable by a preponderance of the evidence, nor has Petitioner established that it is “highly likely” to prevail. *See Interim Fintiv* Guidance at 4. As Patent Owner points out, Koyama teaches that it is necessary to decrease the length of the power lines in order to reduce wiring resistance. *See* Ex. 1010 ¶ 156 (“Since the potential drop becomes larger as the size of the display becomes larger, it is necessary to make the wirings as short as possible which draw out the power supply lines.”). Based on this disclosure, Patent Owner presents reasonable argument, supported by the testimony of Dr. Silzars, that one of ordinary skill would not have been

motivated to modify Koyama 168 to increase the length of the power lines by adding protrusions, which would increase wiring resistance. *See* Prelim. Resp. 41, 43–44 (citing Ex. 1010 ¶ 156; Ex. 2010 ¶ 111), 47–50. Patent Owner also presents facially reasonable arguments, supported by the testimony of Dr. Silzars, that one of ordinary skill would not have combined Koyama 168 with Koyama 604 and/or Koyama 671 as Petitioner proposes because: (1) Koyama 604 is directed to solving problems associated with data and scanning lines rather than power lines; (2) Koyama 604 shows the “protrusions” as being in parallel with the auxiliary wiring line rather than showing a first line with portions extending in first and second directions; (3) Koyama 671’s contact holes are not used for connecting different power supply lines to each other to reduce resistance; and (4) Koyama 671 is not directed to a protrusion on a power line for accommodating multiple contact holes. *See* Prelim. Resp 50–57; Ex. 122–145.

Consequently, we find that Petitioner has not presented a “compelling, meritorious challenge” that “would plainly lead to a conclusion” that claim 1 is unpatentable by a preponderance of the evidence. As a result, factor 6 does not weigh in favor of institution.

7. Conclusion

We take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Fintiv* Order, at 6. Here, we find that the approximately 6-month delay between the estimated trial date and the deadline for a final written decision in this IPR (factor 2), the progress of and investment made by the parties and the Court in the District Court Litigation (factor 3), and the fact that Petitioner is also a party in the District Court Litigation (factor 5) outweigh Petitioner’s stipulation

mitigating the concerns about overlap between the two proceedings (factor 4). We also find that the merits are not compelling and thus factor 6 does not weigh in favor of institution. For these reasons, we find that it is appropriate for us to exercise our discretion under 35 U.S.C. § 314(a) to deny institution of *inter partes* review in this case.

III. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is not instituted for challenged claim 1 of the '267 patent.

IPR2023-00808
Patent 8,164,267 B2

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