

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SHARP CORPORATION,
Petitioner,

v.

SURPASS TECH INNOVATION LLC,
Patent Owner.

Case IPR2015-00022
Patent 7,420,550 B2

Before SALLY C. MEDLEY, BRYAN F. MOORE, and BETH Z. SHAW,
Administrative Patent Judges.

SHAW, *Administrative Patent Judge.*

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Sharp Corporation (“Petitioner”) filed a Petition (“Pet.”) to institute an *inter partes* review of claims 1–5 of Patent 7,420,550 B2 (the “’550 patent”) pursuant to 35 U.S.C. §§ 311–319. Paper 1. Surpass Tech Innovation LLC (“Patent Owner”) filed a Preliminary Response (“Prelim. Resp.”) to the Petition. Paper 8. We have jurisdiction under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

After considering the Petition and Preliminary Response, we determine that Petitioner has not established a reasonable likelihood of prevailing on any of the claims challenged in the Petition. Accordingly, we do not institute an *inter partes* review.

A. The ’550 Patent (Ex. 1001)

The ’550 patent is titled “Liquid Crystal Display Driving Device of Matrix Structure Type And Its Driving Method.” Ex. 1001, Title. The ’550 patent specifically discloses a matrix structure arrangement for a liquid crystal display (LCD) panel in which pixels are arranged in rows and columns.

An example of this structure is shown in Figures 4A and 4B of the ’550 patent. Figure 4A is reproduced below:

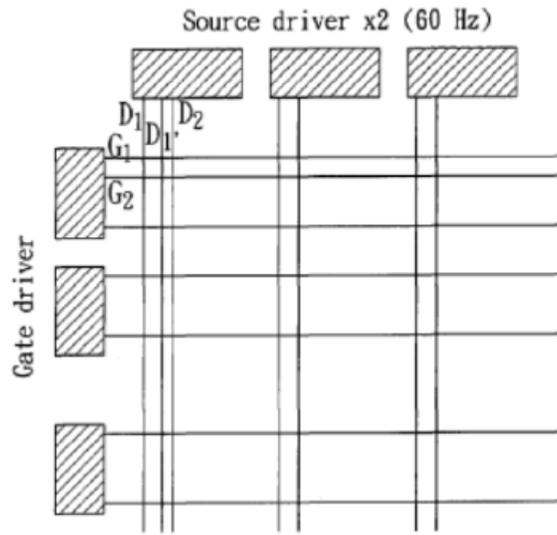


Fig. 4A

Figure 4A depicts a schematic view showing the arrangement of the gate lines and the data lines of the display panel. Ex. 1001, 4:49–51. Figure 4B is reproduced below:

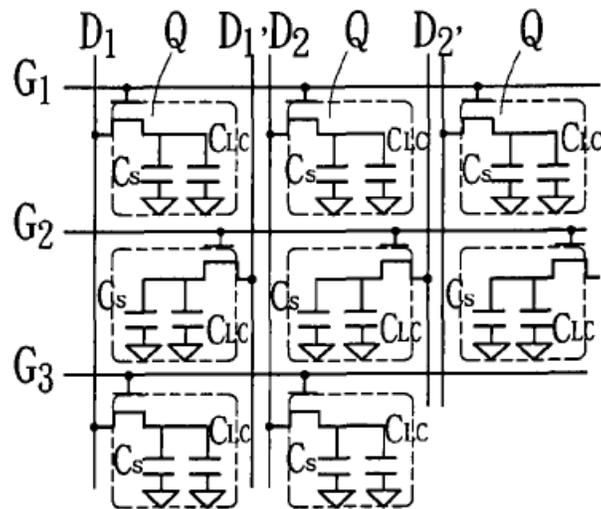


Fig. 4B

Figure 4B depicts an enlarged schematic sectional view taken from Fig. 4A, which shows the arrangement of the gate lines and the data lines and the state of the gate and the source, which are connected to the gate lines and the data lines, of each thin film transistor. *Id.* at 4:52–56.

As shown in Fig. 4A and Fig. 4B, data lines D1, D1', D2, D2' are connected to source drivers, and the data lines are grouped in pairs, such as D1 and D1'. The first and the second data lines D1, D1' of the first group of data lines respectively are connected with the sources of all the thin film transistors Q of the odd and the even rows of the first column. *Id.* at 8:23–26.

The driving device includes a group of thin film transistors Q with matrix array, which consists of N rows and M columns of thin film transistors, wherein, each thin film transistor Q can drive one pixel, so NxM pixels (shown by rectangle with dotted line) can be driven. *Id.* at 8:12–17. The first gate line G₁ is connected with the gates of all the thin film transistors Q of the first row, the second gate line G₂ is connected with the gates of all the thin film transistors Q of the second row, and so are the others. *Id.* at 8:17–20.

B. Illustrative Claim

Independent claim 1 of the '550 patent is illustrative and recites:

1. A liquid crystal display driving device of matrix structure type including:

 a group of thin film transistors with matrix array consisting of N rows and M columns of thin film transistors, wherein each thin film transistor can drive one pixel so that N×M of pixels can be driven;

 a group of N gate lines connected to the gate drivers and insulated with each other, wherein the first gate line is

connected with the gates of all the thin film transistors of the first row, the second gate line is connected with the gates of all the thin film transistors of the second row . . . and the Nth gate line is connected with the gates of all the thin film transistors of the Nth row; and

M groups of data lines connected to the source drivers and insulated with each other, wherein the first and the second data lines of the first group of data lines are respectively connected with the sources of all the thin film transistors of the odd and the even rows of the first column, the first and the second data lines of the second group of data lines are respectively connected with the sources of all the thin film transistors of the odd and the even rows of the second column . . . and the first and the second data lines of the Mth group of data lines are respectively connected with the sources of all thin film transistors of the odd and the even rows of the Mth column, and the first data lines and the second data lines of each group of data lines are connected with the same source driver.

C. The Prior Art

Petitioner relies on the following prior art references as its basis for challenging claims 1–5 of the '550 patent.

Reference	Patent	Exhibit
Shimada et al.	U.S. Patent No. 6,081,250	Ex. 1002 (“Shimada”)
Janssen et al.	PCT Publication WO 02/075708 A2	Ex. 1003 (“Janssen”)
Kubota et al.	U.S. Patent No. 6,300,927 B1	Ex. 1004 (“Kubota”)
Takeuchi et al.	U.S. Patent No. 6,157,056	Ex. 1005 (“Takeuchi”)
Admitted Prior Art	Background of U.S. Patent No. 7,420,550	Ex. 1001, Background (“APA”)

D. The Asserted Grounds of Unpatentability

Petitioner contends the challenged claims are unpatentable under 35 U.S.C. § 103 based on the following grounds (Pet. 12–13):

Statutory Ground	Basis	Challenged Claim(s)
§ 103	Shimada and Kubota	1–5
§ 103	Shimada and Admitted Prior Art	1–3
§ 103	Janssen and Kubota	1–5
§ 103	Janssen and Admitted Prior Art	1–3
§ 103	Shimada, Admitted Prior Art, and Takeuchi	3
§ 103	Janssen, Admitted Prior Art, and Takeuchi	3

E. Claim Interpretation

Consistent with the statute and legislative history of the America Invents Act (AIA), the Board interprets claims using the “broadest reasonable construction in light of the specification of the patent in which [they] appear[.]” 37 C.F.R. § 42.100(b); *see also* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012).

Petitioner proposes claim constructions for “**date lines**,” “**gate lines . . . insulated with each other**,” and “**data lines . . . insulated with each other**.” *See* Pet. 23–25. Petitioner proposes the term “**liquid crystal display driving device**,” which appears in the preamble of the challenged

claims 1–5, is not limiting. Pet. 23. Patent Owner, for purposes of its Preliminary Response, applies Petitioner’s proposed constructions for the terms “liquid crystal display driving device,” “the first and the second date lines of the first group of date lines,” and “insulated with each other.” Prelim. Resp. 9–10.

We have reviewed the Petitioner’s proposed constructions and determined that they are consistent with the broadest reasonable construction. Therefore, we adopt the following claim constructions:

CLAIM TERM	CONSTRUCTION
date lines	Data lines
insulated with each other	Spaced apart from and parallel to each other

II. ANALYSIS

We turn now to Petitioner’s asserted grounds of unpatentability and Patent Owner’s arguments in its Preliminary Response to determine whether Petitioner has met the threshold standard of 35 U.S.C. § 314(a).

A. *Obviousness over the combination of Shimada and Kubota or Shimada and APA*

Petitioner alleges claims 1–5 would have been obvious over the combination of Shimada and Kubota, and that claims 1–3 would have been obvious over the combination of Shimada and APA. Pet. 30–41.

Petitioner proposes the combination of Shimada and Kubota to render obvious claims 1–5, or the combination of Shimada and APA to render

obvious claims 1–3. Pet. 26–41. Petitioner acknowledges that Shimada fails to disclose “multiple, individual gate drivers and source drivers housed within” “Gate Driving Circuit” 109 and “Driving Circuit” 108, and, therefore, cannot teach all the features of the ‘550 patent’s claims 1–5 on its own. Pet. 30.

Patent Owner argues Petitioner provides no basis to modify Shimada in the manner proposed, i.e., with either Kubota or APA. *See* Prelim. Resp. 15. First, as Patent Owner argues, and we agree, the Petition fails to provide factual basis to substantiate its allegation that using “gate and source drivers in Kubota to deliver signals through the gate lines and data lines predictably (and unremarkably) enables the LCD panels taught in Shimada to process and display image data.” Pet. 31. Although Petitioner alleges “the use of multiple gate and source drivers in an LCD device was an available design option in view of Kubota,” *id.*, we find no support for this allegation of design option in the references themselves or in the form of expert testimony, nor does Petitioner cite to any evidence to support this statement. Petitioner’s assertion as to what one of ordinary skill in the art would have known at the time of the invention is based on attorney argument. Argument of counsel cannot take the place of evidence lacking in the record. *Meitzner v. Mindick*, 549 F.2d 775, 782 (CCPA 1977). Moreover, as Patent Owner argues, Kubota discusses problems with this configuration, stating, for example:

This conventional liquid crystal display suffers from the following problems. First, the reliability poses problems, because the scanning and signal line driver circuits are connected with the scanning lines and the signal lines, respectively, of the active matrix circuit by TAB or wire bonding.

Ex. 1004, 1:44–49.

Similarly, Petitioner does not direct attention to evidence to support its allegation that replacing Shimada’s Gate Driving Circuit 109 and Driving Circuit 108 with the multiple gate drivers and multiple source drivers of APA would do no more than yield predictable results. Pet. 40. Rather, the Petition merely states, without support, that “[u]sing multiple gate and source drivers in the Admitted Prior Art to deliver signals to the gate lines and data lines predictably enables the LCD panels taught in Shimada to process and display image data.” Pet. 40–41. Again, attorney argument cannot take the place of evidence that is lacking in the record.

Without an expert declaration to substantiate these claims, and without evidence in the references to support these allegations of predictable results, we are left to speculate as to why the proposed “design choice” or substitutions would yield predictable results. We find Petitioner has not provided an articulated reasoning with some rational underpinning to support the conclusion that it would have been obvious to one of ordinary skill in the art to have modified Shimada with either Kubota or APA. *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).

Thus, Petitioner has not demonstrated that there is a reasonable likelihood that Petitioner will prevail in showing that claims 1–5 of the ’550 patent are unpatentable as obvious over the combination of Shimada and Kubota, or that claims 1–3 of the ’550 patent are unpatentable as obvious over the combination of Shimada and APA.

*B. Obviousness over the combination of Janssen and Kubota or
Janssen and APA*

Petitioner alleges claims 1–5 are obvious over the combination of Janssen and Kubota, and that claims 1–3 are obvious over the combination of Janssen and APA. Pet. 41–59. Petitioner acknowledges that Janssen does not show the gate drivers connected to the gate lines (Pet. 44), and that Janssen does not state explicitly that its transistors are thin film transistors. Pet. 45. Petitioner argues, however, that Janssen suggests the use of gate drivers by teaching that each gate can be activated selectively (Pet. 44), and that Janssen suggests the use of thin film transistors by its circuit symbol. Pet. 45. Petitioner argues that in any event, the use of multiple gate drivers and thin film transistors is shown by Kubota. Pet. 45. Additionally, Petitioner argues the use of multiple gate drivers and an array of thin film transistors also is shown by APA. Pet. 56.

Patent Owner argues the Petition lacks evidence that Janssen’s circuit diagram inherently discloses a thin film transistor, and that the Petition itself indicates conventional transistors could be used in a display panel, rather than thin film transistors. Prelim. Resp. 24–25, citing Pet. 46 citing Ex. 2003. Moreover, Patent Owner argues the combinations of Janssen and Kubota and Janssen and APA also are not supported by evidence to show that such combinations would yield predictable results.

We find Petitioner does not direct attention to evidence to support the argument that Janssen’s transistors are thin film transistors, because Petitioner has not pointed to sufficient evidence, such as an expert declaration, to support this allegation.

Moreover, in the absence of sufficient evidence, we are not persuaded

that the combination of Kubota and Janssen would yield predictable results. Although Petitioner argues “[i]t would have been obvious to a person of ordinary skill in the art to connect the gate drivers 303 of Kubota to the gate lines in Janssen (86, 88, 90, 92) to send control signals to the gates of the transistors in the display panel,” Pet. 45, Petitioner does not direct attention to evidence to support this conclusory statement. We similarly are not persuaded that the combination of Janssen and APA would do no more than yield predictable results. Although the Petition alleges it would have been obvious to use the thin film transistors from APA in Janssen, this allegation also lacks evidentiary support.

Thus, Petitioner has not demonstrated that there is a reasonable likelihood that Petitioner will prevail in showing that claims 1–5 of the ’550 patent are unpatentable as obvious over the combination of Janssen and Kubota, or that claims 1–3 of the ’550 patent are unpatentable as obvious over the combination of Janssen and APA.

C. Obviousness of Dependent Claim 3

Petitioner challenges dependent claim 3 as unpatentable over Shimada, APA, and Takeuchi, as well as over Janssen, APA, and Takeuchi. Pet. 58–60. Petitioner does not allege that Takeuchi remedies the deficiencies discussed above with respect to independent claim 2, from which claim 3 depends. Therefore, Petitioner has not demonstrated that there is a reasonable likelihood that Petitioner will prevail in showing that claim 3 of the ’550 patent is unpatentable as obvious over the combination of Shimada, Janssen, APA, and Takeuchi.

CONCLUSION

For the foregoing reasons, we determine that Petitioner has not shown

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a reasonable likelihood that it would prevail in demonstrating that any of the challenged claims 1–5 of the '550 patent are unpatentable on at least one challenged ground.

III. ORDER

ORDERED that an *inter partes* review of U.S. Patent No. 7,420,550 B2 is not instituted based on this Petition.

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PETITIONER:

Anthony F. Lo Cicero
Brian A. Comack
AMSTER, ROTHSTEIN & EBENSTEIN LLP
alocicero@arelaw.com
Sharp-550IPR@arelaw.com

PATENT OWNER:

Wayne M. Helge (Reg. No. 56,905)
Donald L. Jackson (Reg. No. 41,090)
Michael R. Casey (Reg. No. 40,294)
DAVIDSON BERQUIST JACKSON & GOWDEY,
LLP
whelge@dbjg.com
djackson@dbjg.com
mcasey@dbjg.com