

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BOE TECHNOLOGY GROUP CO., LTD.,

Petitioner,

v.

PANELTOUCH TECHNOLOGIES LLC,

Patent Owner.

Case IPR2025-01267
U.S. Patent No. 11,126,025

PATENT OWNER'S PRELIMINARY RESPONSE

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PATENT OWNER’S EXHIBIT LIST

No.	Description
2001	Docket Navigator IPR Stay Statistics
2002	Docket Navigator Judge Gilstrap Median Time-to-Trial Statistics
2003	<i>Dabico Airport Solutions Inc. v. Axa Power Aps</i> , IPR2025-00408 (Paper 21)
2004	BOE Technology, WIKIPEDIA, available at https://en.wikipedia.org/wiki/BOE_Technology (last accessed October 16, 2025).
2005	US11112025B2, GOOGLE PATENTS, available at https://patents.google.com/patent/US11126025B2/en?q=11126025 (last accessed October 16, 2025).
2006	<i>Proposed Revision to Rules of Practice before the Patent Trial and Appeal Board</i> , DEPARTMENT OF COMMERCE (filed Oct. 16, 2025).
2007	Director’s July 31, 2025 Memorandum (“July 31 Memo”), available at: https://www.uspto.gov/sites/default/files/documents/aapa_memo_final_signed.pdf?utm_campaign=subscriptioncenter&utm_medium=email&utm_source=govdelivery .
2008	Declaration of Dr. Eric Bretschneider in Support of Patent Owner’s Preliminary Response.
2009	<i>Curriculum Vitae</i> of Dr. Eric Bretschneider.

I. Introduction

The Petition challenges three independent claims of the '025 Patent (claims 1, 10, and 18). The Petition should be denied because it violates Board rules, and also fails to show a reasonable likelihood of success with respect to any of the independent claims of the '025 Patent.

As the Acting Director recently acknowledged, a petition “must specify where each element of the claim is found *in the prior art* patents or publications relied upon.” Ex. 2007 at 1. In enforcing this requirement, reliance on “expert testimony,” “common sense,” or any “other evidence that is not” prior art “(collectively, ‘general knowledge’)” “may not be used to supply a missing claim limitation.” *Id.* If a petition fails to comply with this requirement, “the Board *shall deny*” that petition. *Id.*

The Petition repeatedly violates this requirement, and thus should be denied. For example, the Petition fails to even *allege* that every limitation of independent claim 1 is found in the prior art itself, and instead for numerous limitations alleges only that the prior art “teaches, *or at least renders obvious*” nearly all the limitations of independent claim 1. *See, e.g.*, Pet. 27, 29, 32, 33, 40, 53, 54 (alleging the prior art “teaches, or at least renders obvious” numerous claim limitations for claim 1).

While this issue is pervasive throughout all of independent claim 1, the Petition is clearly deficient as to the requirement that the prior art relied upon in showing disclosure of “gate lines... extend along the first direction”—i.e., the

horizontal direction—as required by the Petition’s invalidity theory with respect to claim limitation [1-C]. The Petition alleges this is present in the prior art reference “Kim” based on what “a POSITA would understand,” alleging that because prior art reference “Kim” teaches vertical data lines, horizontal gate lines are inherent in Kim’s disclosure. *See* Pet. 32. But the Petition never establishes why no other option is available such that horizontal gate lines are actually inherent, and Patent Owner’s expert actually addresses the issue and makes clear that horizontal gate lines are **not** inherent.

Furthermore, for the two remaining independent claims (10 and 18), the Petition interprets “dummy touch line” to mean “essentially a fake touch line.” Pet. 15. Petitioner applies this construction to read this on a “spare” touch line in prior art reference Yoshida, but the spare touch lines in Yoshida **are not** fake touch lines because Yoshida expressly teaches that they are used as backup touch lines for purposes of repair (just like how “spare” tires on a car are used as backup tires in case of a flat). These are not “fake touch line[s]” that have no function as a touch line, but rather spare components designed to operate exactly as a touch line would operate.

Accordingly, because the Petition fails to show a reasonable likelihood of success, institution should be denied.

II. The Petition fails to show that Kim discloses horizontal gate lines as Petitioner’s theory requires (Claim 1).

Limitation [1-C] recites “gate lines that extend along the first direction and supply gate signals to the transistors respectively.” Under the Petition’s theory, the “first direction” is “horizontal.” *See* Pet. 27 (“For purposes of this claim mapping, the ‘first direction’ will refer to horizontal....”). The Petition relies solely on Kim for this limitation (*see* Pet. 32), and thus must show that Kim teaches the limitation. Ex. 2007 at 1 (“...expert testimony, common sense, and other evidence that is not ‘prior art consisting of patents or printed publications’ (collectively, ‘general knowledge’) may not be used to supply a missing claim limitation.”).

The Petition does not affirmatively allege that Kim teaches “gate lines that extend along the first direction”; instead, the Petition alleges that Kim “Kim teaches, *or at least renders obvious*” the limitation. Pet. 32 (“Kim teaches, or at least renders obvious, ‘gate lines that extend along the first direction and supply gate signals to the transistors respectively.’”); *id.* (“Kim also teaches, or at least renders obvious, that its gate lines ‘extend along the first direction,’ *i.e.*, horizontal.”).

The Petition, however, does not point to any disclosure of Kim that actually teaches its gate lines run horizontally. Instead, the Petition relies on general knowledge in alleging that “[h]orizontal gate lines have been a conventional part of [] LCD design for decades, so a POSITA would understand that the gate lines extend in the first direction.” Pet. 32. Allegations regarding conventional knowledge,

however, are irrelevant to an allegation that the “prior art patents or publications” relied upon disclose a limitation under the Board’s regulations. Ex. 2007 at 1.

After discussing conventional knowledge, the Petition turns to what is arguably an inherency argument, in alleging that Kim’s “gate lines ***must*** run horizontally.” Pet. 32. The entirety of Petition’s argument in this regard is reproduced below:

Kim teaches that the gate lines intersect with the data lines. Because, as explained below, the data lines run vertically, a POSITA would understand that the gate lines ***must*** run horizontally.

Pet. 32 (citations omitted). Petitioner’s inherency logic uses the following structure:

- Premise #1: Kim’s “gate lines intersect with [Kim’s] data lines.”
- Premise #2: Kim’s “data lines run vertically.”
- Conclusion: Kim’s “gate lines must run horizontally.”

In other words, the Petition asserts that in order for gate lines to intersect with vertical data lines, those gate lines ***must*** run horizontally.

The Petition’s logic cannot withstand scrutiny, because it is well-understood that lines can *intersect* each other without being *perpendicular to* one another. Indeed, two lines can intersect so long as they are not exactly *parallel* to one another. Ex. 2008, ¶¶66–72. Accordingly, such that vertical data lines could be intersected by nearly-vertical gate lines, or intersected by non-horizontal gate lines at a 45- or 30-

degree angle. *Id.* at ¶70. The gate lines thus not *need* be horizontal lines, as the Petition inaccurately contends.

Because the Petition relies on what is at most an inherency theory as it pertains to the relied-upon prior art disclosing horizontal gate lines as the claims require for Petitioner’s claim mapping, the Petition fails to show that horizontal gate lines are found in the prior art references or patent publications relied upon for this limitation as the Board’s rules require.

III. The Petition fails to show that Yoshida discloses a “dummy touch line” (Independent Claims 10 and 18).

The Petition alleges that a “dummy touch line” should be “construed to mean ‘a line that does not carry a touch signal.’” Pet. 15. Petitioner clarifies, however, that a POSITA would further understand that a “dummy touch line” is a line that is “non-functional as a touch line—essentially a fake touch line.” Pet. 15; *see also* Ex. 1003, *id.* at ¶210 (acknowledging that a dummy touch line “needs to be a line that does not function as a touch line”).

In alleging that the prior art discloses the claimed “dummy touch line,” the Petition relies exclusively on the “Yoshida” reference.

Specifically, the Petition identifies Yoshida’s “spare touch lines” as disclosing this limitation. The Petition’s theory in this respect fails, however, because Yoshida’s “spare touch lines” *are* “functional as a touch line,” contrary to the Petition’s stated understanding of what “dummy touch line” requires. *See* Pet. 15.

For instance, Petitioner's expert acknowledges that are specifically designed to function as touch lines in case a non-spare touch line is damaged or otherwise faulty. *See* Pet. 22 (noting that Yoshida's spare touch lines "can be connected to a touch electrode to replace a faulty touch line").

Just as a "spare tire" being "non-functional as a tire" would entirely defeat the point, Yoshida's dummy touch lines must be functional as touch lines to serve their purpose. Thus, Yoshida's dummy touch lines are not "non-functional as a touch line" any more so than a spare tire is "non-functional as a tire." (spare tire being non-functional as a tire would defeat the point. Just like spare keys or spare tires which *are* functional as keys and tires respectively, Yoshida's spare touch lines are functional as touch lines. The fact that they are not always actively in use is of no consequence, just as regular touch lines are not always actively in use (e.g., when the LCD is not powered on). The indisputable fact is that they are replacement or excess touch lines and thus *are* functional as touch lines. Ex. 2008, ¶¶73–75.

Yoshida itself makes this understanding clear, noting that the "spare" touch lines are literally touch lines, merely "excess" ones. *See* Ex. 1008, [0035] ("[E]xcess touch lines 31 are caused.... [T]he total of 17 excess touch lines 31 with respect to the column of the touch electrodes 30 arranged in the Y-axis direction are used as the spare touch lines 41 available for disconnection repair."); *see also* Pet. 81 (citing this teaching of Yoshida and agreeing that "these spare touch lines are 'excess' touch

lines”).

As explained by Patent Owner’s expert Dr. Bretschneider, a POSITA would readily understand that Yoshida’s “excess” or “spare” touch lines *are* functional touch lines; otherwise, they could not be used as touch lines as Yoshida expressly teaches. Ex. 2008, ¶74. The testimony of Petitioner’s own expert, which makes clear that “the spare touch lines” act as a “substitute” if “a regular touch line becomes damaged or disconnected.” Ex. 1003, ¶88.

Despite acknowledging that Yoshida’s spare touch lines are, in fact, functional as touch lines, the Petition implies that they satisfy the requirement because “they are not themselves connected to the touch electrodes” (which Petitioner maps to the “common electrodes”—*see* Pet. 73). *See* Pet. 81 (alleging that because Yoshida’s “excess” or “spare” touch lines “are not connected with the (green) touch electrodes 30,” they “do not carry any touch signal” and thus are “dummy touch lines”). But this argument conflates the recited concept of a “dummy touch line” with the separately-recited requirement that the dummy touch line be “electrically isolated from any of the common electrodes” (limitation [18-F]) or “not electrically connected to any of the common electrodes” (limitation [10-F]). The Petition itself acknowledges that “[t]he claims recite... to what [the dummy touch line] must not be connected,” yet still asserts that “construction is necessary because the claim provides no guidance to distinguish a ‘dummy touch line’ from other

lines.” Pet. 14–15. Thus, under the Petition’s own logic, it cannot be the case that is disclosed to be functional as a touch line is a “dummy touch line” merely because it is not connected to the alleged “common electrodes” (i.e., Yoshida’s touch electrodes). In sum, Yoshida’s spare lines are functional touch lines which are designed to perform the function of carrying touch signals—they not “fake” or “non-functional” touch lines under the Petition’s construction, any more than a spare tire is a “fake” or “non-functional” tire.

Furthermore, to the extent that Petitioner alleges that “dummy touch lines” encompass literally every line that is not actively carrying a touch signal (*see* Pet. 15—contending that a “dummy touch line” is “a line that does not carry a touch signal”), that construction is both overbroad and inconsistent with the understanding of POSITAs including Petitioner’s own expert.

For instance, under that construction, *all* the touch lines a device would be “dummy touch lines” whenever there is no active touch signal being applied to the lines (e.g., when the device is turned off). Such a construction would render claim terms meaningless, as there would be no distinction between the claimed “touch lines” and “dummy touch lines.” Ex. 2008, ¶75.

Likewise, such an interpretation is inconsistent with the understanding of Petitioner’s expert that “dummy touch line” includes additional requirements, such as being “similar in form to a touch line” and being a “non-functional... touch line.”

Ex. 1003, ¶31. Neither Petitioner nor Dr. Flasck provide any evidence (other than conclusory assertions that are entitled to no weight) that a POSITA would understand literally any line that does not carry a touch signal to be a “dummy touch signal.” And as explained by Patent Owner’s expert, this understanding would encompass lines that no POSITA would ever refer to as “dummy touch lines,” including power supply lines, data lines, and clock lines. Ex. 2008, ¶75.

In sum, the Petition’s reliance on Yoshida fails under either of two alternative reasons. First, it is inconsistent with the Petition’s own acknowledgement that a “dummy touch line” must be “non-functional as a touch line” (Pet. 15), because Yoshida’s touch lines *are* functional as a touch line. And in the alternative, to the extent the Petition’s construction of “dummy touch line” includes literally every “line that does not carry a touch signal” (regardless of whether such a line is functional as a touch line), such a construction is unsupported by any credible evidence and inconsistent with the understanding of a POSITA.

Accordingly, the Petition has not met its burden of showing a reasonable likelihood of success on the merits as to this limitation, which is present in both independent claim 10 and independent claim 18.

IV. Conclusion

The Board should decline to institute on the merits. The Petition fails to identify where in the prior art every limitation is found contrary to Board regulations,

and the Petition additionally fails to show a reasonable likelihood of success on the merits.

Date: November 18, 2025

Respectfully submitted,

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CERTIFICATE OF WORD COUNT

I certify that there are 2199 words in this paper, excluding the portions exempted under 37 C.F.R. § 42.24(a)(1), according to the word count tool in Microsoft Word.

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e)(1))

The undersigned hereby certifies that the above document was served on November 18, 2025, by filing this document through the P-TACTS system as well as delivering a copy via electronic mail upon the following attorneys of record for the Petitioner:

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