

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.,
Petitioner,

v.

ADVANCED INTEGRATED CIRCUIT PROCESS LLC,
Patent Owner.

IPR2025-01210
U.S. Patent 7,632,751

**PETITIONER’S SUR-REPLY IN SUPPORT OF ITS OPPOSITION TO
PATENT OWNER’S DISCRETIONARY DENIAL REQUEST**

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P.O. Box 1450
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AICP seeks to lump all 5 IPRs together, hoping the Director will ignore the specific facts justifying institution here. AICP cannot seriously dispute that the Examiner erred when allowing the claims. AICP also ignores TSMC's expansive stipulation (eliminating all overlap with district court proceeding) and TSMC's offer to withdraw all non-asserted claims if AICP covenants not to sue. A holistic review of all considerations and the Petition's strong merits supports institution.

Examiner Errors (Nearly All Undisputed) Justify Institution. TSMC established that two references, Watanabe and Hasunuma, disclose the claim features the Examiner believed to be novel, i.e., a “dummy hole” incapable of having current flow therethrough, and “forming...an interconnect trench.” Paper-14, 9-10. Both references anticipate many challenged '751 claims, and fell within numerous subclasses searched for the parent '623 patent, the results of which were considered during prosecution of the '751 patent. *Id.*, 9-11. ***AICP does not contest any of these facts.*** AICP can only meekly claim this is not “error” (Paper-15, 3). But missing multiple anticipatory references right in front of the examiner is error, plain and simple. Though not the only errors, such unrefuted mistakes alone merit institution.

TSMC also showed that 2 of only 8 ***cited*** references – Kunikiyo and Nasu – likewise disclose the allegedly novel “dummy hole” feature of claim 1. Paper-14, 4-8. ***AICP similarly ignores these facts, as they cannot be disputed.*** Nor does AICP refute the line of decisions establishing that examiner error overlooking cited

reference teachings that disclose the feature(s) relied on for allowance warrants institution to correct the errors. *See id.*, 11-12 (citing decisions). Nor does the Petition need to present every single reference demonstrating examiner error.

AICP tries to deflect by questioning whether Kunikiyo's Figure 12 discloses forming an "interconnect **trench**" (Paper-15, 1-2)—ignoring that "examiner error" does not require a §102 showing. Either way, AICP is wrong. Kunikiyo expressly states that dual damascene processing was used (TSMC-1007, 12:47-51 ("[T]he dual damascene method is performed again, thus forming upper-layer interconnections...(28a...) and plugs...(26a to 26c)...(29a...) in the...interlayer insulating film 23.")). Such dual damascene processing includes forming an interconnect trench in the insulating film, and thus Kunikiyo anticipates claim 1. TSMC-1072, 124-35.

AICP attempts further misdirection, implying that TSMC argues Nasu teaches an "interconnect trench." Paper-15, 1, 3. This is wrong. Rather, in addition to detailing how Nasu teaches the allegedly novel "dummy hole," TSMC notes it was **obvious** to form Nasu's interconnect using an interconnect trench. Paper-14, 7-8.

TSMC's Petition includes **two §102 references and a single-reference §103 reference**. Paper-14, 12-13. AICP accuses TSMC of a "stalking horse" tactic to hide that it has no response to the Petition's very strong merits, filing no POPR and saying only that it "*intends* to develop rebuttals." Paper-15, 3. That the Examiner missed numerous §102 teachings directly cited or encompassed by the Examiner's search

results warrants institution to address these errors and the Petition’s strong merits.

AICP’s “Settled Expectations” and *Fintiv* Arguments Fail. AICP does not dispute that its settled expectations are offset by Petitioner’s expectation of not being sued on expired patents. Paper-14, 15-16 (citing cases). Further, AICP possesses no “licenses,” and identifies no other evidence of “commercialization.” TSMC-1064, 1; Paper-15, 4. The weakness of its argument is underscored by [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Regarding *Fintiv*, AICP’s myopic reliance on the currently-scheduled trial date wholly ignores current time-to-trial statistics showing the projected FWD will likely predate trial, rendering this factor neutral. Paper-14, 18-19. AICP also ignores TSMC’s expansive stipulation (eliminating all overlap with district court proceeding) and TSMC’s offer to withdraw all non-asserted claims if AICP covenants not to sue. *Id.*, 18. AICP’s wishful thinking that litigation discovery will eliminate §102(e) references (Paper-15, 4-5) remains highly speculative and implausible.

National Security and the Public Interest Justify Review. TSMC has provided specific examples of products critical to the public interest and military interests that contain AICP-targeted chips. Paper-14, 22-25. AICP asserts it has “waived injunctive remedies” (Paper-15, 5), but has not done so in District Court.

Date: November 12, 2025

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

Pursuant to the Board's email dated November 3, 2025, granting Petitioner's request for a 3-page sur-reply (*see* Exhibit 3103), the undersigned hereby certifies that this brief complies with the authorized type-volume limitation because this brief does not exceed 3 pages.

Date: November 12, 2025

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CERTIFICATE OF SERVICE

The undersigned hereby certifies, in accordance with 37 C.F.R. § 42.205, that the foregoing **Petitioner's Sur-Reply in Support of its Opposition to Patent Owner's Discretionary Denial Request** was served on November 12, 2025, via e-mail directed to counsel of record for Patent Owner at the following:

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Patent Owner has consented to electronic service via email.

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