

Filed on behalf of BeSang Inc.

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEL CORPORATION,
Petitioner,

v.

BESANG INC.,
Patent Owner.

Case No. IPR2023-00991
U.S. Patent No. 7,378,702

PATENT OWNER'S PRELIMINARY SUR-REPLY

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TABLE OF EXHIBITS

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2001	First Amended Docket Control Order, <i>BeSang Inc. v. Micron Tech., Inc.</i> , Case No. 2:23-cv-00028, Dkt. 54 (E.D. Tex. June 21, 2023)
2002	Docket for <i>BeSang Inc. v. Micron Tech., Inc.</i> , Case No. 2:23-cv-00028 (E.D. Tex.) (as of Sept. 14, 2023)
2003	Docket for <i>BeSang Inc. v. Intel Corp.</i> , Case No. 3:23-cv-00113 (D. Or.) (as of Sept. 14, 2023)
2004	Defendants' Patent Local Rule 3-3 Disclosure of Invalidity Contentions, <i>BeSang Inc. v. Micron Tech., Inc.</i> , Case No. 2:23-cv-00028 (E.D. Tex. July 11, 2023) (cover pleading)
2005	Ann S. Mutschler, <i>Stanford, Korean nanofab center, Oregon-based semi startup claim 3D IC breakthrough</i> , EDN (Aug. 13, 2008), https://www.edn.com/stanford-korean-nanofab-center-oregon-based-semi-startup-claim-3d-ic-breakthrough/
2006	Press Release, <i>Micron and Intel Unveil New 3D NAND Flash Memory Technology Advancements Enable Three Times More Capacity than Other NAND Technologies</i> , Intel (Mar. 26, 2015), https://download.intel.com/newsroom/2021/archive/2015-03-26-news-releases-micron-and-intel-unveil-new-3d-nand-flash-memory.pdf
2007	Peter Clarke, <i>EE Times updates list of emerging startups to version 8.0</i> , EE Times (Feb. 2, 2009), https://www.eetimes.com/ee-times-updates-list-of-emerging-startups-to-version-8-0/
2008	<i>Exploring the Potential of Emerging Semiconductor Technology</i> , Global Semiconductor Alliance Forum, Vol. 18, No. 2 (June 2011), https://www.gsaglobal.org/wp-content/uploads/2019/04/201102_GSA_Forum.pdf
2009	<i>Looking Beyond TSV For 3D IC Technology</i> , Frost & Sullivan (Mar. 2009), http://www.growthconsulting.frost.com/web/images.nsf/0/EF8B206A32BBD551652575B4002F3CD5/\$File/TIAlert.htm

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2010	Press Release, <i>Micron and Intel Extend their Leadership in 3D NAND Flash memory</i> , Globe News Wire (May 21, 2018), https://www.globenewswire.com/news-release/2018/05/21/1509614/14450/en/Micron-and-Intel-Extend-their-Leadership-in-3D-NAND-Flash-memory.html
2011	Micron Unveils 3D NAND (Mar. 26, 2015), https://www.youtube.com/watch?v=Lo-rsZ0vznw
2012	<i>Radar Scope</i> , Semiconductor Times, Vol. 12, No. 4 (Apr. 2007)
2013	RESERVED
2014	1/29/2007 Email from Peter Feeley to BeSang
2015	7/30/2007 Email exchange between Tom Arnold, Sang-Yun Lee, and others
2016	Andy Patrizio, <i>Impact of Intel and Micron ending their NAND partnership is negligible</i> , Network World (Jan. 12, 2018), https://www.networkworld.com/article/3247746/impact-of-intel-and-micron-ending-their-nand-partnership-is-negligible.html
2017	Intel Corporation’s Invalidity Contentions, <i>BeSang Inc. v. Intel Corp.</i> , Case No. 3:23-cv-00113 (D. Or. July 14, 2023) (cover pleading)
2018	USPTO Assignment Abstract of Title for U.S. Patent Application Publication No. 2003/0157748
2019	U.S. District Courts – Combined Civil and Criminal Federal Court Management Statistics (June 30, 2023), https://www.uscourts.gov/statistics-reports/federal-court-management-statistics-june-2023
2020	9/22/2023 Email from Board to Counsel of Record Authorizing Preliminary Reply and Sur-Reply Briefing
2021	Intel Corporation’s Motion to Extend Temporary Stay for Three Months, <i>BeSang Inc. v. Intel Corp.</i> , Case No. 3:23-cv-00113, Dkt. 74 (D. Or. Sept. 15, 2023)

Intel’s Preliminary Reply (Paper 7, “Pre-Reply”) confirms the Board should not institute trial. Intel promised that its Reply would be limited to “discretionary denial,” EX2020 at 1, but instead attempts to bolster the merits of its flawed Petition and submit a belated stipulation seeking to avoid *Fintiv*. The Reply doesn’t shift the balance for *Fintiv* or *General Plastic*, and Intel’s tactical decision to devote a single sentence to *Fintiv* in its original Petition should not be rewarded. Pet. at 92.

General Plastic. The *General Plastic* factors support denying institution.

Of course Intel and Micron have a relationship under factor 1, and Intel doth protest too much that they are “unrelated parties.” Pre-Reply at 1. Intel doesn’t dispute its identical interest with Micron in avoiding liability in the co-pending patent litigations, their “long-term joint development partnership for 3D NAND memory” (EX2016 at 1), or both companies’ joint press releases about 3D NAND (*e.g.*, EX2010) cited in both complaints (EX1013 ¶¶ 16, 31, 33, 48; EX1032 ¶¶ 23, 36, 45). Intel had no trouble admitting in the district court that the litigation is about this 3D NAND memory. EX2021 at 3 (Intel: “BeSang accuses former Intel products that incorporated 3D NAND flash memory chips”).

Intel’s other assertions for factor 1 are unavailing. Intel quickly backpedals from its prior request “to set[] both cases on the same trial schedule” after institution, Pet. at 93, now insisting on reply that “the IPR schedules do not need coordination,” Pre-Reply at 2. Intel’s assurance that it hasn’t shared “drafts or discussions” about

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its IPR, *id.* at 1-2, doesn't shift the balance for factor 1. *PayPal v. IOENGINE*, IPR2019-00884, 2019 WL 4897039, at *5 (P.T.A.B. Oct. 3, 2019) (denying institution: "Although Petitioner states that the Petition was prepared 'without contribution from Ingenico,' that, by itself, does not contradict the existence of a significant and meaningful relationship between the parties." (internal citation omitted)). Intel also has no answer for the fact that Claim 1 is unasserted and shares many limitations with asserted Claim 13. Pre-Reply at 5; POPR at 17.

Factors 2-3 also support denial. POPR at 18-20. Intel's Reply concedes the Petition relies on the same "overlapping references" as Micron's. Pre-Reply at 5. Intel also doesn't dispute it knew of its cited art before Micron filed. *Id.* It never rebuts that it benefitted from Micron's earlier petition, or establishes that its arguments about Endoh and Lee don't have significant overlap. *Id.*

For factors 4-5, Intel provides no showing of when it learned of the art or excuse for its delay, particularly since there's no dispute Intel has known of the challenged '702 Patent since before 2015. *Id.*; EX1013 ¶ 76. Nor does Intel address factors 6-7, or provide any justification for its second petition. Pre-Reply at 5.

Fintiv. The Reply also fails to shift the weight of the *Fintiv* factors.

The claim that Intel's begrudging stipulation "ends the *Fintiv* inquiry," *id.* at 2, is contradicted by the stipulation itself. Intel's submission falls short of a *Sotera* stipulation by carving out any circumstance that "otherwise terminate[s] the

instituted IPR.” EX1033 at 1. In other words, absent a FWD, Intel’s stipulation is an empty promise. *See id.* Because the Micron litigation will undoubtedly resolve validity before any FWD here, Intel’s stipulation should be held “meaningless.” *Immersion Sys. v. Midas Green Techs.*, IPR2021-01176, 2022 WL 93850, at *9 (P.T.A.B. Jan. 6, 2022) (stipulation requiring FWD “meaningless” where it “will have no effect because a trial would occur before the deadline for a [FWD] here”).

Intel next asks the Board to disregard the Micron litigation. Pre-Reply at 2. Intel cites no supporting authority, and has no response to BeSang’s citations to the *TCO* and *Fitbit* decisions denying institution under *Fintiv* due to co-pending litigation involving another party. *See id.*; POPR at 24-25.

The Reply does not dispute *Fintiv* factor 1. Pre-Reply at 2-3.

For factor 2, Intel agrees the Micron case is set for trial before the FWD deadline, *id.* at 2, supporting non-institution here. *Samsung Elecs. v. Calif. Inst. of Tech.*, IPR2023-00130, 2023 WL 5157594, at *7 (P.T.A.B. May 4, 2023). Micron’s speculation that the trial date will move should be given no weight. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, 2020 WL 2486683, at *5 (May 13, 2020) (informative) (Board “take[s] courts’ trial schedules at face value”); *NXP USA v. Impinj*, IPR2021-01556, 2022 WL 3702992, at *3 (P.T.A.B. Aug. 25, 2022) (rejecting “Petitioner’s argument that... the district court trial date is inaccurate [as] based on speculation”).

As to factor 3, Intel’s claim that the Micron case is in early stages is contradicted by its recognition that a jury will resolve patent validity before a FWD here. Pre-Reply at 2. Intel’s concession that Micron did not submit a proper *Sotera* stipulation in the parallel IPR2023-00900 (only “a *Sand Revolution*-type stipulation”), shows that this IPR will necessarily duplicate efforts by repeating invalidity challenges presented in the Micron trial, undercutting factor 4. Pre-Reply at 3. For factor 5, Intel’s protesting it’s not a party in the Micron case disregards its close relationship with Micron. POPR at 16-17; *Apple v. Fintiv*, IPR2020-00019, 2020 WL 2126495, at *6 (P.T.A.B. Mar. 20, 2020) (precedential) (petitioner must address any district court proceedings involving the patent).

Finally, Intel’s Reply shows no compelling merits in its Petition:

Grounds 1A, 1B, 1C, 1D, 2A. Intel cannot plausibly assert these grounds are compelling when they are built on claim constructions that Intel itself states are “incorrect,” and the grounds themselves do not include any “alternative constructions” but are predicated on only a single proposed construction. POPR at 29-33; Pre-Reply at 4; *ResMed v. Cleveland Med. Devices*, IPR2023-00565, Paper 13 at 17 (P.T.A.B. Sept. 25, 2023) (“Petitioner’s strategy undermines its argument that the Petition presents a compelling unpatentability challenge” where it “is asking us to review the unpatentability arguments under a construction it already asserted... is wrong”). Intel’s latest claim that these grounds are “based on BeSang’s

litigation constructions,” Pre-Reply at 3, is refuted by its district court admission that “claim construction disclosures” have not occurred, EX2021 at 3.

Grounds 1C, 1E, 1F. The Reply has no response for the Petition’s alleged motivation to combine Lee with non-monolithic stacked wafers in Kim/Aspar being contradicted by Lee itself, *see* POPR at 33-39, and further misunderstands that Intel itself bears the burden to establish motivation to combine, Pre-Reply at 3-4.

Grounds 2A, 2B, 2C. Intel’s protest that “a dielectric layer that is ‘part of’ of the substrate” is “unclear,” *id.* at 4, is not compelling because it was Intel’s own interpretation, *see* POPR at 40 (citing Pet. at 90-91). Even if it were, the Petition never established Johnson disclosed a “dielectric layer disposed above the electrical devices,” *id.* at 40-45, or a motivation to combine for Grounds 2B-2C, *id.* at 45-48.

Ground 3. For unasserted Claim 1, Intel seeks to rewrite its Petition on reply by citing to Figures 9 and 10 of the patent and arguing for the first time that “complete separation is not required.” Pre-Reply at 5 (citing EX1001 at Figs. 9, 10). The Board should reject Intel’s new argument and citation, which are entirely absent from Ground 3. *Netflix v. Robocast*, IPR2023-00081, 2023 WL 5162380, at *14 n.8 (P.T.A.B. May 11, 2023) (preliminary reply on *Fintiv* may not “offer new argument and evidence to bolster its case to make it more compelling”). Even if considered, this new argument fails because Park did not disclose or suggest memory cells separated from each other. POPR at 48-53.

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CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a true copy of the foregoing **PATENT OWNER’S PRELIMINARY SUR-REPLY** and **EXHIBITS 2020-2021** are being served electronically on October 6, 2023 to the following lead counsel for Petitioner to the following email addresses:

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