

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEL CORPORATION

Petitioner

v.

BESANG INC.,

Patent Owner

IPR2023-00991

U.S. Patent No. 7,378,702

Preliminary Reply to Patent Owner's Preliminary Response

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PETITIONER’S EXHIBIT LIST

Exhibit No.	DESCRIPTION
1001	U.S. Patent 7,378,702 (“702Pat.”)
1002	File History of U.S. Patent 7,378,702 (“702FH”)
1003	Declaration of Dr. Carl Sechen (“Sechen”)
1004	Curriculum Vitae of Dr. Carl Sechen
1005	U.S. Patent 7,052,941 (“941Pat.”)
1006	File History of U.S. Patent 7,052,941 (“941FH”)
1007	U.S. Patent Appl. Publ. No. 2002/0028541 (“Lee”)
1008	U.S. Patent Appl. Publ. No. 2003/0157748 (“Kim”)
1009	Aspar, The Generic Nature of the Smart-Cut® Process for Thin Film Transfer, 30 J. Elec. Materials 834 (2001) (“Aspar”)
1010	U.S. Patent No. 6,034,882 (“Johnson”)
1011	U.S. Patent No. 5,571,730 (“Park”)
1012	U.S. Patent App. Publ. No. 2002/0154556 (“Endoh”)
1013	Complaint in <i>BeSang Inc. v. Intel Corporation</i> , 3:23-cv-00113-MAH (D. Or. January 23, 2023)
1014	Silicon Processing, Vol. 1 by Stanley Wolf (2000)
1015	Silicon Processing, Vol. 4 by Stanley Wolf (2002)
1016	U.S. Patent No. 6,355,501 (“Fung”)
1017	U.S. Patent No. 5,414,288 (“Fitch”)
1018	U.S. Patent No. 6,027,975 (“Hergenrother”)
1019	U.S. Patent No. 6,337,247 (“Schulz”)
1020	U.S. Patent No. 6,449,186 (“Noble”)
1021	U.S. Patent No. 6,943,067 (“Greenlaw”)
1022	IEEE 100: The Authoritative Dictionary of IEEE Standards Terms, Seventh Edition (2000)
1023	U.S. Patent No. 5,882,987 (“Srikrishnan”)
1024	Maleville et al., Multiple SOI layers by multiple Smart-Cut® transfers, 2000 IEEE International SOI Conference (Oct. 2000) (“Maleville”)
1025	U.S. Patent No. 5,615,148 (“Yamamura”)
1026	U.S. Patent No. 5,544,103 (“Lambertson”)
1027	U.S. Patent No. 6,381,173 (“Zatelli”)
1028	Declaration of J. Munford
1029	Minutes from Rule 16 Conference in <i>BeSang Inc. v. Intel Corporation</i> , 3:23-cv-00113-MAH

Exhibit No.	DESCRIPTION
1030	March, 2023 Average Time to Trial Statistics for the District of Oregon
1031	Excerpts of Endoh (EX1012)
1032	Complaint, <i>BeSang Inc. v. Micron Tech., Inc.</i> , Case No. 2:23-cv-00028
1033	Intel <i>Sotera</i> Stipulation Letter
1034	Notice of <i>Sotera</i> Stipulation in <i>BeSang Inc. v. Intel Corporation</i> , 3:23-cv-00113-MAH (D. Or.)
1035	Email Court Correspondence Confirming Stay of <i>Besang Inc. v. Intel Corp.</i> , Case No. 3:23-cv-00113
1036	Updated Docket, <i>BeSang, Inc. v. Micron Tech, Inc.</i> , Cas No. 2:23-cv-00028

Petitioner was granted leave to reply on: (1) *Fintiv* and (2) *General Plastic*.
Institution should be granted for the reasons in the Petition and below.

I. INTEL AND MICRON ARE UNRELATED PARTIES

BeSang's district court contentions show Intel and Micron have different interests. Importantly, BeSang's contentions here about Micron/Intel joint development (POPR 16) are a red herring because BeSang does not assert any infringement based on those activities. *See* EX1013; EX1032. BeSang sued Micron and Intel in different jurisdictions, accusing different SSD products (EX1013, ¶¶25, 46 & n.11; EX1032, ¶¶41, 54 & nn.13-19) of infringing different claim sets (EX2004, 1; EX2017, 2). Neither district court complaint alleges Micron-Intel joint infringement, and Micron is mentioned in the Intel complaint and vice versa only in press release titles in footnotes. EX1013; EX1032. BeSang accuses recent/future Micron product releases (EX1032, ¶41 & n.19), whereas BeSang acknowledges Intel sold its accused SSD product business to non-party SK hynix (EX1013, ¶26 & fn.12). The Board should reject BeSang's attempt to paint Micron and Intel as joint actors for discretionary denial purposes when BeSang's own litigation conduct shows otherwise.

II. INTEL AND MICRON ARE NOT COORDINATING

Contrary to BeSang's assertions (POPR 17), Intel and Micron have not coordinated IPRs, and no drafts or discussions of references or grounds have been

shared. Further, the IPR schedules do not need coordination because the NOFDAs were mailed just 19 days apart (Paper 3, 1; IPR2023-00900, Paper 5, 1).

III. THE *FINTIV* FACTORS DO NOT SUPPORT DISCRETIONARY DENIAL

The Board May Not Deny Under Fintiv in View of Intel's Sotera Stipulation. Intel has filed a notice of its *Sotera* stipulation in district court concurrently with filing this preliminary reply. EX1033; EX1034. Under the Director's Guidance, this ends the *Fintiv* inquiry. For completeness, Intel shows below a *Fintiv* denial would be inappropriate based on the *Fintiv* factors and compelling merits.

The Intel Litigation Cannot Support a Fintiv Denial. Even without Intel's *Sotera* stipulation, BeSang cannot seriously argue the Intel litigation supports a *Fintiv* denial because that litigation has no trial date, has been stayed temporarily since July 27, and is at an early stage (with only contentions exchanged). *See* EX2003, Dkt. 45, 65, 66; EX1035, 2; EX2019, 74 (35.3 month median time to trial). Intel diligently filed its Petition just over four months after being sued.

The Micron Litigation Should Not Be Considered and Does Not Support a Fintiv Denial in Any Event. Even considering Micron's litigation (which the Board should not), that litigation would not support such a denial. For Factor 2, the district court has set a November 18, 2024 trial date in the Micron litigation (only slightly before the expected December 2024 FWD deadline) (EX2001, 1). But the district

court judge has 10 trials scheduled for the Micron trial date, as well as a pending motion to transfer, all of which could result in significant delay (EX1036; EX2019, 71; IPR2023-000900, Paper 7, 1-2). *Western Digital Techs., Inc. v. Viasat, Inc.*, IPR2022-01126, Paper 13, 8-9 (Nov. 29, 2022) (Factor 2 neutral where the parallel litigation “may begin either shortly before or within a few months after the projected statutory deadline for a final written decision in this proceeding”). For Factor 3, Intel and Micron were both extremely diligent in filing their petitions, just over four and three months after being sued respectively. Much work will remain in the Micron litigation, including a *Markman* hearing and the close of fact discovery five and six months after institution respectively. For Factor 4, in addition to the Micron litigation being at an early stage (and thus premature to assess overlap), Micron has provided a stipulation broader than a *Sand Revolution*-type stipulation. IPR2023-000900, EX1031. Importantly, Intel is not a party to the Micron litigation, and so Factor 5 also weighs heavily against exercising discretion.

Intel’s Challenges Present Compelling Merits. Intel provided a *Sotera* stipulation, and Factors 1-5 do not support a *Fintiv* denial. EX1034. Nevertheless, such a denial would be inappropriate because Intel’s challenges present compelling merits. First, BeSang has presented ***no*** merits arguments as to Intel’s Grounds 1A, B, D (Lee-based grounds for claims 13-17 based on BeSang’s litigation constructions), and only unsupported attorney argument on motivation to combine

for Grounds 1C, E, F (Lee-based grounds under Intel’s proposed constructions). POPR 33-39. BeSang argues Intel’s challenges under alternative constructions are improper, but the Board has found it permissible for a petitioner to address alternative constructions. *E.g., ResMed, Inc. v. N.Y. Univ.*, IPR2022-00993, Paper 17, 14 (Dec. 8, 2022). For Grounds 1C, E, F, Intel provided numerous reasons, supported by expert testimony, for motivation to combine. Pet. 50-64; EX1003, ¶¶192-197, 204-215. Intel’s Grounds 1A-F present compelling merits.

Intel’s remaining grounds for claims 1 and 13 also present compelling merits. For Ground 2A, BeSang suggests 13[a] requires a dielectric layer that is “part of” the substrate (POPR 40), but it is unclear what such a requirement would entail and Intel has not suggested construing 13[a] in this way (which would be inconsistent with the intrinsic record in any event).¹ Further, Intel shows Johnson teaches 13[a], including a dielectric disposed above electrical devices. EX1010, 13:26-29 (processing begins with a wafer in which “CMOS transistors [electrical devices] may be fabricated ... An insulator [dielectric] *then* is deposited ...”) (emphasis added) (cited at Pet. 66); EX1003, ¶226. For Grounds 2B-C, BeSang makes only unsupported attorney argument about motivation to combine (*see* POPR 45-48; Pet.

¹ If BeSang urges a specific construction of 13[a] following institution, Intel may further address that construction during trial.

74-82; EX1003, ¶¶244-263). Finally, BeSang's single argument as to Ground 3 (Park's memory cells are not separated from each other by dielectric material (POPR 48-53)) is contrary to the intrinsic record showing complete separation is not required (*e.g.*, EX1001, Figs. 9-10). All of Intel's unpatentability grounds present compelling merits, and discretionary denial would be inappropriate.

IV. **GENERAL PLASTIC DOES NOT SUPPORT DISCRETIONARY DENIAL**

Intel and Micron filed their IPR petitions less than one month apart with no coordination or cooperation, and with no significant relationship to warrant considering Intel's Petition as serial as discussed above. For Factor 1, in addition, Intel has challenged independent claim 1, which is not challenged in the Micron petition. *Tesla, Inc. v. Charge Fusion Techs., LLC*, IPR2023-00062, Paper 13, 9 (May 11, 2023). As to Factors 2, 4, and 5, contrary to BeSang's arguments regarding Intel delay (POPR 18-21), Intel filed its Petition just over four months after being sued, ***almost eight months before the statutory deadline***. For Factor 3, Intel filed its Petition well before the Micron POPR. *E.g., Apple Inc. v. Speir Techs. Ltd.*, IPR2022-01512, Paper 11, 9 (May 15, 2023). Further, a brief review of the two IPR petitions and corresponding expert reports shows little similarities other than some overlapping references. In addition, compelling merits show Intel's Petition should not be discretionarily denied. The Board should not deny institution under *General Plastic*. *E.g., Western Digital*, IPR2022-01126, Paper 13, 15.

Date: September 29, 2023

Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that on September 29, 2023 I caused a true and correct copy of the foregoing Preliminary Reply to Patent Owner's Preliminary Response in IPR2023-00991 and supporting exhibits to be served via electronic mail to Patent Owner's designated counsel listed below:

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