

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner

v.

CALIFORNIA INSTITUTE OF TECHNOLOGY,
Patent Owner

U.S. PATENT NO. 7,421,032

Case No. IPR2023-00133

**PETITIONER'S REPLY
TO PATENT OWNER'S PRELIMINARY RESPONSE**

Authorized by Board Email dated March 2, 2013

PETITIONER'S UPDATED EXHIBIT LIST

Exhibit No.	Description
Ex. 1001	U.S. Patent No. 7,421,032
Ex. 1002	Declaration of Matthew C. Valenti, Ph.D., P.E.
Ex. 1003	Curriculum Vitae of Matthew C. Valenti, Ph.D., P.E.
Ex. 1004	Prosecution History of U.S. Patent No. 7,421,032
Ex. 1005	U.S. Patent No. 6,029,264 to Kobayashi et al. (“ <i>Kobayashi</i> ”)
Ex. 1006	McEliece <i>et al.</i> , “Turbo Decoding as an Instance of Pearl’s ‘Belief Propagation’ Algorithm,” <i>IEEE Journal On Selected Areas in Communication</i> , Vol. 16, No. 2 (February 1998). (“ <i>McEliece</i> ”)
Ex. 1007	MacKay, “A Free Energy Minimization Framework for Inference Problems in Modulo 2 Arithmetic,” <i>Fast Software Encryption</i> , B. Preneel, Ed. Berlin, Germany: Spigner-Verlag Lecture Notes in Computer Science, Vol. 1008 (1995). (“ <i>MacKay</i> ”)
Ex. 1008	RESERVED
Ex. 1009	Rorabaugh, <i>Error Coding Cookbook: Practical C/C++ Routines and Recipes for Error Detection and Correction</i> (1996). (“ <i>Rorabaugh</i> ”)
Ex. 1010	Lin & Costello, <i>Error Control Coding: Fundamentals and Applications</i> (1983). (“ <i>Lin/Costello</i> ”)
Ex. 1011	Cheng, “On the Construction of Efficient Multilevel Coded Modulations,” <i>Proceedings 1997 IEEE International Symposium on Information Theory</i> (July 1997). (“ <i>Cheng I</i> ”)
Ex. 1012	Cheng, “Iterative Decoding,” Ph.D. dissertation, California Institute of Technology, Pasadena, CA (March 1997). (“ <i>Cheng II</i> ”)
Ex. 1013	RESERVED
Ex. 1014	RESERVED
Ex. 1015	Docket Control Order (Dkt. No. 27), from <i>California Institute of Technology v. Samsung Electronics Co., Ltd.</i> , No. 2-21-cv-00446 (E.D. Tex.)
Ex. 1016	National Judicial Caseload Profile (June 30, 2022)

Exhibit No.	Description
Ex. 1017	First Amended Complaint (Dkt. No. 42), from <i>California Institute of Technology v. Samsung Electronics Co., Ltd.</i> , No. 2-21-cv-00446 (E.D. Tex.)
Ex. 1018	Plaintiff Caltech's Infringement Disclosures, Exhibit 1 (Preliminary Claim Chart for U.S. Patent No. 7,116,710), from <i>California Institute of Technology v. Samsung Electronics Co., Ltd.</i> , No. 2-21-cv-00446 (E.D. Tex.)
Ex. 1019	Claim Construction Memorandum and Order (Dkt. No. 125), from <i>California Institute of Technology v. Samsung Electronics Co., Ltd.</i> , No. 2-21-cv-00446 (E.D. Tex.)

The *Fintiv* factors weigh against discretionary denial, particularly factors 4 and 3 in light of the “intermediate” parallel-litigation stipulation set forth below. Moreover, the strength of the Petition should foreclose discretionary denial.

Factor 4: Petitioner hereby stipulates, if the IPR is instituted, not to pursue invalidity challenges to the '032 Patent in the parallel district court lawsuit that rely on any reference used in the grounds of the Petition (Kobayashi and McEliece). In light of this “intermediate” stipulation, this factor strongly favors institution. *See Ericsson Inc. v. Koninklijke KPN N.V.*, IPR2022-00069, Paper 9 at 13-14 (May 25, 2022) (“Petitioner’s [intermediate] stipulation here ‘mitigates any concerns of duplicative efforts between the district court and the Board[.]’”).

Factor 3: Patent Owner (“PO”) has not identified any substantial efforts it has made to litigate the validity issue, the relevant question under factor 3. *See Sand Revolution II v. Cont’l Inter.*, IPR2019-01393, Paper 24 at 11-12 (June 16, 2020) (informative). While the *Markman* order involved indefiniteness issues for a handful of claims (EX1019), “much of the [] court’s investment relates to ancillary matters untethered to the validity issue itself.” *See id.* at 10. And Samsung’s stipulation “limits the relevance of the parties’ investment in” the parallel proceeding. *See Ericsson Inc.*, IPR2022-00069, Paper 9 at 13-14. This factor favors institution.

Factor 2: This factor is neutral. Though trial in the district court is presently scheduled before a final written decision would issue, “an early trial date” is “non-

dispositive” and simply means that “the decision whether to institute will likely implicate other factors,” which, as explained in the Petition and herein, favors institution. *Fintiv*, 5, 9. Moreover, this factor addresses the concern that a trial a final written decision addressing the same prior art and arguments undermine the Board’s objectives of providing an efficient alternative to district court litigation. *NHK Springs Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (Sept. 12, 2018) (precedential). Here, however, Samsung’s “intermediate” stipulation above ensures that the Board will not address prior art or arguments presented in district court.

Factor 1: This factor is neutral. Though Samsung’s initial stay request was denied, the Eastern District of Texas has indicated that pre-institution denials are a matter of course rather than a merits judgment: “In this district, courts usually deny motions for stay when the PTAB has not acted on a petition for *inter partes* review.” *Perdiemco LLC v. Telular Corp.*, No. 2:16-CV-01408-JRG-RSP, 2017 WL 2444736, at *2 (E.D. Tex. June 6, 2017). Per the usual practice in the Eastern District, the denial does not prejudice to Samsung’s ability to refile upon institution. *See Solas OLED Ltd. v. Samsung*, No. 2:19-CV-00152-JRG, 2020 WL 4040716, at *2, *4 (E.D. Tex. July 17, 2020) (considering a second motion and according “weight to the timing of” the original).

PO also refers to prior litigation of the asserted patents in a *different* district to argue that a stay is unlikely. POPR at 51. It is improper, however, to “infer, based

on actions taken in a different case with different facts, how the District Court would rule should a stay be requested by the parties in the parallel case[.]” *See Fintiv*, IPR2020-00019, Paper 15 at 12 (May 13, 2020) (informative).

Factor 6: To the extent the panel concludes that the *Fintiv* factors compel a discretionary denial, the highly meritorious Petition “strengthen[s] the patent system by allowing the review of patents challenged with a sufficiently strong initial merits showing of unpatentability.” *CommScope Tech. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 4 (Feb. 27, 2023) (precedential). The Petition here presents compelling evidence of unpatentability. To argue otherwise, PO resorts to disavowing the broad claim construction of “repeat” that it advocated for at the Federal Circuit (POPR, 3-5) and denying that Kobayashi’s generator matrix discloses matrix multiplication to generate bits (*id.*, 21-23). Further, PO did not submit an expert declaration and, as a result, Dr. Valenti’s opinions are unrebutted. And PO’s arguments regarding the prior IPR petitions are unavailing: most claims challenged in those prior IPRs relied upon obviousness combinations, some up to *four* references. Here, Ground 1 applies a single reference for independent claims 1 and 11. In fact, for most of the challenged claims, no combination of references is needed to demonstrate unpatentability. Finally, the numerous prior IPRs are a result of PO’s own choice to litigate its claims serially.

Date: March 10, 2023

Respectfully submitted,

/Robert A. Appleby/

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing document was served on March 10, 2023 via electronic mail directed to counsel of record for the Patent Owner at the following:

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