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. 7,116,710

Case No. IPR2023-00130

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. 7,116,710
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. 7,116,710
Ex. 1005	U.S. Patent No. 6,029,264 to Kobayashi et al. ("*Kobayashi*")
Ex. 1006	McEliece *et al.*, "Turbo Decoding as an Instance of Pearl's 'Belief Propagation' Algorithm," *IEEE Journal On Selected Areas in Communication*, Vol. 16, No. 2 (February 1998). ("*McEliece*")
Ex. 1007	MacKay, "A Free Energy Minimization Framework for Inference Problems in Modulo 2 Arithmetic," *Fast Software Encryption*, B. Preneel, Ed. Berlin, Germany: Spigner-Verlag Lecture Notes in Computer Science, Vol. 1008 (1995). ("*MacKay*")
Ex. 1008	U.S. Patent No. 5,381,408 to Brent et al.
Ex. 1009	Rorabaugh, *Error Coding Cookbook: Practical C/C++ Routines and Recipes for Error Detection and Correction* (1996). ("*Rorabaugh*")
Ex. 1010	Lin & Costello, *Error Control Coding: Fundamentals and Applications* (1983). ("*Lin/Costello*")
Ex. 1011	Cheng, "On the Construction of Efficient Multilevel Coded Modulations," *Proceedings 1997 IEEE International Symposium on Information Theory* (July 1997). ("*Cheng I*")
Ex. 1012	Cheng, "Iterative Decoding," Ph.D. dissertation, California Institute of Technology, Pasadena, CA (March 1997). ("*Cheng II*")
Ex. 1013	Gallager, "Low-Density Parity-Check Codes," *IRE Transactions on Information Theory*, Vol. 8, No. 1 (January 1962).
Ex. 1014	Forney, Jr., "The Viterbi Algorithm," *Proceedings of the IEEE*, Vol. 61, No. 3 (March 1973).
Ex. 1015	Docket Control Order (Dkt. No. 27), from *California Institute of Technology v. Samsung Electronics Co., Ltd.*, No. 2-21-cv-00446 (E.D. Tex.)

Exhibit No.	Description
Ex. 1016	National Judicial Caseload Profile (June 30, 2022)
Ex. 1017	First Amended Complaint (Dkt. No. 42), from *California Institute of Technology v. Samsung Electronics Co., Ltd.*, 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 *California Institute of Technology v. Samsung Electronics Co., Ltd.*, No. 2-21-cv-00446 (E.D. Tex.)
Ex. 1019	Claim Construction Memorandum and Order (Dkt. No. 125), from *California Institute of Technology v. Samsung Electronics Co., Ltd.*, 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 '710 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*, 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. *Apple Inc. v. Fintiv Inc.*, IPR2020-00019, Paper 11 at 5, 9 (Mar. 20, 2020). Moreover, this factor addresses the concern that a trial before the final written decision addressing the same prior art and arguments will undermine the Board's objectives of providing an efficient alternative to district court litigation. *See 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: "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, 2017 WL 2444736, at *2 (E.D. Tex. June 6, 2017). Per the usual practice in the Eastern District, the denial does not prejudice Samsung's ability to refile upon institution. *See Solas OLED Ltd. v. Samsung*, No. 2:19-CV-00152, 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 40. It is improper, however, to "infer, based

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