# UNITED STATES PATENT AND TRADEMARK OFFICE

\_\_\_\_

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEL CORPORATION, GLOBALFOUNDRIES U.S., INC.,
MICRON TECHNOLOGY, INC. and
SAMSUNG ELECTRONICS COMPANY, LTD.,
Petitioners,

v.

DANIEL L. FLAMM,

Patent Owner.

PTAB Case No. IPR2017-00282<sup>1</sup>
Patent No. RE40,264 E

### PETITIONERS' REPLY TO PATENT OWNER'S RESPONSE

Claims 56-63 & 70-71

<sup>&</sup>lt;sup>1</sup> Samsung Electronics Company, Ltd. was joined as a party to this proceeding via a Motion for Joinder in IPR2017-01752.



# TABLE OF CONTENTS

Page

I.	Intro	duction1				
II.	Combinations based on Kadomura and Matsumura rendered claims 56-63 and 70-71 obvious					
	A.	The prior art taught changing processing temperature within a "preselected time [period]"				
	B.	It would have been obvious to combine Kadomura and Matsumura				
		1.	A skilled person would have combined Kadomura and Matsumura	5		
		2.	Flamm does not meaningfully address some of Petitioners' motivations and his arguments on the others fail	8		
	C.	Flan	nm mischaracterizes Kadomura and Matsumura	13		
		1.	Kadomura	13		
		2.	Matsumura	15		
	D.	Combinations based on Kadomura and Matsumura rendered dependent claims 57 and 63 obvious				
		1.	Claim 57	17		
		2.	Claim 63	18		
III.	Combinations based on Muller, Matsumura, and Wang also rendered claims 56-63 and 70-71 obvious					
	A.	A skilled person would have been motivated to combine Muller, Matsumura, and Wang to render claim 60 obvious				
	B.	Muller, Matsumura, Wang, and Kikuchi rendered claim 63 obvious				
IV.	Flam	Flamm has waived any arguments unique to other dependent claims22				
V.	Flam	Flamm's supporting declaration is entitled to little, if any, weight2				
VI.	Conc	Conclusion2				



## TABLE OF AUTHORITIES

CASES	
Meiresonne v. Google, Inc., 849 F.3d 1379 (Fed. Cir. 2017)	15, 16
OTHER AUTHORITIES	
37 C.F.R. § 42.65(a)	23



## **UPDATED EXHIBIT LIST**

Petitioner's Exhibits				
Exhibit	Description			
Ex. 1001	U.S. Patent No. RE40,264 ("'264 patent")			
Ex. 1002	U.S. Patent No. 5,605,600 ("Muller")			
Ex. 1003	U.S. Patent No. 5,151,871 ("Matsumura")			
Ex. 1004	U.S. Patent No. 5,226,056 ("Kikuchi")			
Ex. 1005	U.S. Patent No. 6,063,710 ("Kadomura")			
Ex. 1006	Declaration of Dr. John Bravman in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. RE40,264			
Ex. 1007	U.S. Patent Application No. 08/567,224 ("'224 application")			
Ex. 1008	Wright, D.R. et al., A Closed Loop Temperature Control System for a Low-Temperature Etch Chuck, Advanced Techniques for Integrated Processing II, Vol. 1803 (1992), pp. 321–329 ("Wright")			
Ex. 1009	U.S. Patent No. 5,711,849 ("'849 patent")			
Ex. 1010	U.S. Patent No. 4,992,391 ("Wang")			
Ex. 1011	Fischl, D.S. et al., <i>Etching of Tungsten and Tungsten Silicide Films by Chlorine Atoms</i> , J. Electrochemical Soc.: Solid-State Science and Technology, Vol. 135, No. 8 (August 1988), pp. 2016-2019 ("Fischl")			
Ex. 1012	U.S. Patent No. 4,331,485 ("Gat")			
Ex. 1013	U.S. Patent No. 5,393,374 ("Sato")			
Ex. 1014	PTAB Decision Denying Institution of <i>Inter Partes</i> Review, <i>Lam Research Corp. v. Daniel L. Flamm</i> , IPR2016-00469, Paper 6 (July 1, 2016)			



# **UPDATED EXHIBIT LIST** (continued)

Ex. 1015	PTAB Institution of <i>Inter Partes</i> Review, <i>Lam Research Corp. v.</i> Daniel L. Flamm, IPR2015-01768, Paper 7 (February 24, 2016)
Ex. 1016	Petition for <i>Inter Partes</i> Review of U.S. Patent No. RE40,264 E Fourth Petition, <i>Lam Research Corp. v. Daniel L. Flamm</i> , IPR2015-01768, Paper 1 (August 18, 2015)
Ex. 1017	U.S. Patent No. 5,242,536 ("Schoenborn")
Ex. 1018	U.S. Patent No. 5,174,856 ("Hwang")
Ex. 1019	Declaration of Rachel J. Watters regarding Exhibit 1008
Ex. 1020	Declaration of Rachel J. Watters regarding Exhibit 1011
Ex. 1021	Declaration of Jared Bobrow in Support of Motion for Pro Hac Vice Admission
Ex. 1022	Declaration of Chad Campbell in Support of Motion for Pro Hac Vice Admission
Ex. 1023	Reply Declaration of Dr. John Bravman in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. RE40,264 and Reply to Patent Owner's Response
Ex. 1024	Final Written Decision, <i>Thorley Indus. LLC v. Kolcraft Enter.</i> , <i>Inc.</i> , IPR2016-00352, Paper 25 (June 1, 2017)
Ex. 1025	Final Written Decision, <i>inContact</i> , <i>Inc. v. Microlog Corp.</i> , IPR2015-00560, Paper 21 (July 28, 2016)
Ex. 1026	Patent Owner Preliminary Response, <i>Lam Research Corp. v. Daniel L. Flamm</i> , IPR2016-00469, Paper 5 (April 27, 2016)
Ex. 1027	Final Written Decision, <i>Curt G. Joa, Inc. v. Fameccanica.Data S.p.A.</i> , IPR2016-00906, Paper 79 (October 11, 2017)
Ex. 1028	Decision Denying Institution of <i>Inter Partes</i> Review, <i>Kinetic Techs., Inc. v. Skyworks Sols., Inc.</i> , IPR2014-00529, Paper 8 (September 23, 2014)



# DOCKET

# Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

# **Real-Time Litigation Alerts**



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

# **Advanced Docket Research**



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

# **Analytics At Your Fingertips**



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

### API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

#### **LAW FIRMS**

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

#### **FINANCIAL INSTITUTIONS**

Litigation and bankruptcy checks for companies and debtors.

## **E-DISCOVERY AND LEGAL VENDORS**

Sync your system to PACER to automate legal marketing.

