UNITED STAT	ES PATENT AND	TRADEMARK OFFIC	Œ
BEFORE THE	PATENT TRIAL	AND APPEAL BOARI	)

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD, AND TSMC NORTH AMERICA CORP.

Petitioner

v.

ZOND, LLC Patent Owner

U.S. Patent No. 7,808,184

Inter Partes Review Case No. 2014-00799

\_\_\_\_

PATENT OWNER'S PRELIMINARY RESPONSE UNDER 37 CFR § 42.107(a)



# **TABLE OF CONTENTS**

I.	IN	TRODUCTION	1
II.	TI	ECHNOLOGY BACKGROUND	5
	A.	Overview of Pulsed Plasma Systems	5
	В.	The '184 Patent: Dr. Chistyakov Invents a Pulse Control Technique for Rapidly Increasing a Plasma's Electron Density Without Arcing	7
III.	SU	JMMARY OF PETITIONER'S PROPOSED GROUNDS	10
IV	. CI	LAIM CONSTRUCTION UNDER 37 C.F.R. §§ 42.104(B)(3)	10
	A.	Construction of "Weakly Ionized Plasma" and "Strongly Ionized Plasma"	11
	В.	Petitioner's Implicit Construction of Other Claim Language is Unclear and Does Not Comply with 42 C.F.R. § 42.104(b) or Federal Circuit Law	13
	C.	Patent Owner's Construction of "Voltage Pulse Having At Least One of a Controlled Amplitude and a Controlled Rise Time."	14
V.		ETITIONER HAS FAILED TO SHOW A REASONABLE LIKELIHOOD F PREVAILING.	16
		A. Defects Common to All Grounds.	16
		Petition Fails to Follow the Proper Legal Framework For an Obviousness     Analysis.	16
		2. Petition Violates Page Restrictions by Incorporating Sixty-Six Pages of Claim Charts.	18
	В.	Defects in Ground I: Petitioner Failed To Demonstrate That Claims 1, 2, 4, 5, 11, 12, 14 and 15 Are Obvious Over Mozgrin and Kudryavtsev under 35 U.S.C. § 103(a).	19
		Scope and Content of the Prior Art.	20
		a. Kudryavtsev	20
		b. Mozgrin's Experiments.	23
		2. Differences Between the Claim and the Art.	25



	3.	Level of Skill in the Art.	31
	4.	Incompatibility of the References and Absence of Motivation to Combine.	31
5.	С	onclusion: Petitioner Has Not Shown a Reasonable Likelihood of Success on Any Claim Challenged in Ground I.	34
	6.	Ground I: Dependent claims 2 and 12	35
	7.	Ground I: Dependent claims 4 and 14	35
	8.	Ground I: Claims 5 and 15.	36
A.	Ι	Defects In Ground II: Petitioner Failed To Demonstrate A Reasonable Likelihood That Claims 1, 2, 4, 5, 11, 12, 14 and 15 Are Obvious Over Mozgrin and Mozgrin's Thesis under 35 U.S.C. § 103(a)	38
	1.	The Petition Fails to Prove that Mozgrin's Thesis is Prior Art	38
	2.	Mozgrin Thesis Does Not Teach the Claimed Invention	41
В.	Ε	Defects In Ground III: Petitioner Failed To Demonstrate A Reasonable Likelihood That Claims 3 and 13 Are Obvious Over Mozgrin, Kudryavtsev and Wang under 35 U.S.C. § 103(a)	43
C.	Γ	Defects In Ground IV: Petitioner Failed To Demonstrate A Reasonable Likelihood That Claims 3 and 13 Are Obvious Over Mozgrin, Mozgrin's Thesis, and Wang under 35 U.S.C. § 103(a).	45
D.	Ι	Defects In Ground V: Petitioner Failed To Demonstrate A Reasonable Likelihood That Claims 1 – 5, and 11 – 15 Are Obvious Over Wang and Kudryavtsev under 35 U.S.C. § 103(a)	46
	1.	Ground V: Dependent Claims 2, 12, 3, 13, 4, and 14.	49
	2.	Ground V: Dependent Claims 5, 15	49
C	ONI	CLUCION	50



## **EXHIBIT LIST**

Exhibit No.	Description
Ex. 2001	Information Disclosure Statement
Ex. 2002	Webster's New World College Dictionary, 4 <sup>th</sup> Edition, 2008
Ex. 2003	U.S. Patent No. 6,896,773
Ex. 2004	U.S. Patent No. 6,806,652



### I. Introduction

The Petitioner has represented in a motion for joinder (paper no. 6) that this petition "is identical to the Intel IPR in all substantive respects, includes identical exhibits, and relies upon the same expert declarant." Accordingly, based upon that representation, the Patent Owner opposes review on the same basis presented in opposition to Intel's request no. IPR2014-00455, which is repeated below.

The present petition for *inter partes* review of U.S. Patent No. 7,808,184 ("the '184 patent") relies solely on theories of obviousness woven almost entirely from prior art references<sup>1</sup> already considered by the patent office<sup>2</sup> but without persuasive reasons why the outcome should be any different here. In fact, it does not even address the requisite factual inquiries for an obviousness analysis as set forth by the Supreme Court,<sup>3</sup> and skirts several other significant

<sup>&</sup>lt;sup>3</sup> Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966); KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 399 (2007) ("[T]he [Graham] factors define the controlling inquiry"); Liberty Mutual v. Progressive Casualty, CMB-2012-00003, paper 7 at 2 – 3.



<sup>&</sup>lt;sup>1</sup> Ex. 1003, Mozgrin; Ex. 1004, Kudyavtsev; Ex. 1005, Wang.

<sup>&</sup>lt;sup>2</sup> Ex. 2001, Information Disclosure Statement, pgs. 2, 6.

# 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.

