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						
Patent No. 7,116,710						

DECLARATION OF MATTHEW C. VALENTI, PH.D., P.E. IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 7,116,710



TABLE OF CONTENTS

I.	INTRODUCTION1						
II.	BACKGROUND AND QUALIFICATIONS						
III.	MATERIALS REVIEWED						
IV.		PERSON OF ORDINARY SKILL IN THE ART AND THE TIME OF THE ALLEGED INVENTION10					
V.	TECHNICAL BACKGROUND						
	A.	Error Control Coding11					
	B.	Matri	x Multiplication and Modulo-2 Arithmetic	13			
VI.	THE	THE '710 PATENT					
VII.	CLAI	AIM CONSTRUCTION19					
VIII.	OVERVIEW OF THE PRIOR ART2						
	A.	Koba	yashi (Ex. 1005)	20			
	B.	McEl	liece (Ex. 1006)	24			
IX.	THE PRIOR ART DISCLOSES AND/OR SUGGESTS THE RECITED FEATURES OF CLAIMS 11-17 AND 19-33 OF THE '710 PATENT						
	A.		<i>yashi</i> Discloses the Features of Claims 11-12, 14-17, 19, 2, 24-27, 29, and 32-33	29			
		1.	Claim 11	29			
		2.	Claim 12	43			
		3.	Claim 14	44			
		4.	Claim 15	45			
		5.	Claim 16	47			
		6.	Claim 17	48			



	7.	Claim 19	49
	8.	Claim 21	51
	9.	Claim 22	51
	10.	Claim 24	52
	11.	Claim 25	52
	12.	Claim 26	65
	13.	Claim 27	67
	14.	Claim 29	67
	15.	Claim 32	67
	16.	Claim 33	69
В.		<i>nyashi</i> Discloses and/or Suggests the Features of Claims 13, 7, 20, 23 and 28	70
	1.	Claim 13	70
	2.	Claim 16	76
	3.	Claim 17	80
	4.	Claim 20	81
	5.	Claim 23	81
	6.	Claim 28	83
C.		ayashi in View of McEliece Discloses and/or Suggests the ares of Claims 13, 20, and 25-33	84
	1.	Claim 13	84
	2.	Claim 20	94
	3.	Claim 25	95
	4.	Claim 26	97

	5.	Claim 27	97
	6.	Claim 28	97
	7.	Claim 29	98
	8.	Claim 30	98
	9.	Claim 31	99
	10.	Claim 32	102
	11.	Claim 33	104
X	CONCLUS	SION	105

I, Matthew C. Valenti, Ph.D., P.E., declare as follows:

I. INTRODUCTION

- 1. I have been retained by Samsung Electronics Co., Ltd. ("Petitioner") as an independent expert consultant in this proceeding before the United States Patent and Trademark Office ("PTO") against California Institute of Technology ("Patent Owner") regarding U.S. Patent No. 7,116,710 ("the '710 patent") (Ex. 1001). I have been asked to consider whether certain references disclose or suggest the features recited in claims 11-17 and 19-33 ("the challenged claims") of the '710 patent. My opinions are set forth below.
- 2. I am being compensated at a rate of \$525/hour for my work in this proceeding. My compensation is in no way contingent on the nature of my findings, the presentation of my findings in testimony, or the outcome of this or any other proceeding. I have no other interest in this proceeding.



1

¹ Where appropriate, I refer to exhibits that I understand are to be attached to the petition for *inter partes* review of the '710 patent.

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.

