PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2919289

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
NICHOLAS ODIN LIEN	06/25/2014
ARA PATAPOUTIAN	06/25/2014
JEFFREY J. PREAM	06/24/2014
YOUNG PIL KIM	06/25/2014
DAVID ORRIN SLUITER	06/24/2014

RECEIVING PARTY DATA

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Street Address:	10200 S. DE ANZA BLVD.
City:	CUPERTINO
State/Country:	CALIFORNIA
Postal Code:	95014

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14319021

CORRESPONDENCE DATA

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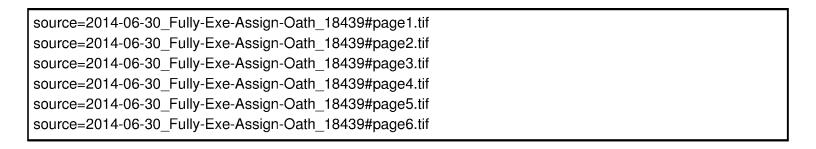
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ATTORNEY DOCKET NUMBER:	STL 18439.00
NAME OF SUBMITTER:	SHAWN MARKHAM
SIGNATURE:	/Shawn Markham/
DATE SIGNED:	06/30/2014
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 6

PATENT

502872692 REEL: 033209 FRAME: 0610



PATENT REEL: 033209 FRAME: 0611

COMBINED ASSIGNMENT - OATH

WHEREAS, Nicholas Odin Lien of Farmington, MN, Ara Patapoutian of Hopkinton, MA, Jeffrey J. Pream of

Seagate Docket No.:

18439

inv apı	ention entitled <u>MULTI-DIMENSIONAL DATA RANDOMIZATION</u> that is the subject matter of: (check all that oly)
	a provisional application for Letters Patent which is identifiable in the United States Patent and Trademark Office
	by Application No. filed on :
\boxtimes	an application for Letters Patent which is identifiable in the United States Patent and Trademark Office by
	Application No filed on and/or executed on even date
	herewith: and
	an international application for Letters Patent filed pursuant to the Patent Cooperation Treaty which is
	identifiable in the United States Receiving Office by Application Nofiled on
	; and/or executed on even date herewith:

Berthoud, CO, Young Pil Kim of Eden Prairie, MN and David Orrin Sluiter of Superior, CO is/are the inventor(s) of an

WHEREAS, Seagate Technology LLC, a limited liability company organized and existing under the laws of the State of Delaware and the United States of America, and having offices at 10200 S. De Anza Blvd, Cupertino, CA 95014 USA, ("Assignee") is desirous of acquiring the entire right, title and interest in and to the invention, the applications, and any and all Letters Patent or similar foreign or domestic legal protection;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I transfer to Assignee, its successors and assigns, my entire right, title and interest in and to the invention, the above-identified applications, all provisional applications from which any of the above-identified applications claim priority, corresponding domestic and foreign applications, any continuation, division, renewal, or substitute for the applications, all Letters Patent, any reissue, re-examination, or similar legal protection issuing related to the Letters Patent, and all rights and benefits under any applicable treaty or convention; and I authorize the Director of the United States Patent and Trademark Office or foreign equivalent to issue the Letters Patent or similar legal protection to the Assignee.

I authorize the Assignee, its successors and assigns, to insert in this instrument the filing date(s) and application numbers when ascertained. I further authorize the Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent or similar legal protection, in its own name if desired, in any and all foreign countries and appoint Assignee the common representative in the above identified international application and any international application for the invention.

I represent to the Assignee, its successors and assigns, that I have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. I, my executors or administrators, will at any time upon request, without additional consideration, but at the expense of the Assignee, its successors and assigns, execute and deliver to Assignee or its legal representatives such additional writings and do such additional acts as the Assignee, its successors and assigns, may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries, including without limitation providing testimony in any related interference, litigation or proceeding.

The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment specifically referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

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STL 18439 Combined Assignment -Oath

Rev: 10/18/2012

PATENT REEL: 033209 FRAME: 0612

NICHOLAS ODIN LIEN (Inventor)

before me, 187

personally appeared_ __(Inventor), who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of Minnesoft that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



ARA PATAPOUTIAN (Inventor)

6/25/14

State of Massachusetts

County of LLYCLStell

2014 before me.

Carrie Golden Notory Public (Insert name and title of the office)

personally appeared // / / / / / / / / / (inventor), who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of Massacus Sthat the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____

Signature of Notery Public

(Seal)



Carrie Golden Koley Public Meseschusetts Ommission Expirse Mey 9, 2019

	JERSON JAREAM (Inventor)
State of <u>CO-COLOAD</u>)	6/24/14 Date
County of <u>BULLALL</u>) On <u>JULL 24, 2014</u> before me,	Buully Your, (insert name and title of the officer)
	COTY (Inventor), who proved to me on the use name is subscribed to the within instrument and acknowledged to me dispacity, and that by his/her signature on the instrument the person, or
I certify under PENALTY OF PERJURY under the li paragraph is true and correct.	Rate was
WITNESS my hand and official seal.	CHI POND
Signature Duruly Young	(Seal)

	YOUNG FIL KIM PRIVATION	
State of $4n U$	6/25/14 Date	nenew
County of <u>Scutt</u>		

I certify under PENALTY OF PERJURY under the laws of the State of _______ that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public (Seal)

RHONDA M. CARL
Notary Public-Minnesota
My Commission Expires Jan 31, 2016

DAVID ORRIN SLUITER (Inventor)

(Seal)

STL 18439 Combined Assignment -Oath

RECORDED: 06/30/2014

OUL YOUR Signature of Notary Public

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Rev: 10/18/2012

PATENT REEL: 033209 FRAME: 0617