### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT3492896

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
OSAMU TORII	08/05/2015
HARUKA OBATA	08/05/2015
RYO YAMAKI	08/05/2015
DAIKI WATANABE	08/05/2015

#### **RECEIVING PARTY DATA**

Name:	KABUSHIKI KAISHA TOSHIBA
Street Address:	1-1, Shibaura 1-chome, Minato-Ku
City:	Tokyo
State/Country:	Japan
Postal Code:	105-8001

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	14832023

#### **CORRESPONDENCE DATA**

Fax Number: (703)413-2220

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

(703) 413-3000 Phone:

Email: knewett@oblon.com **Correspondent Name:** OBLON, ET AL. Address Line 1: 1940 DUKE STREET

Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER:	458758US20
NAME OF SUBMITTER:	KRISTIN NEWETT
SIGNATURE:	/Kristin Newett/
DATE SIGNED:	08/21/2015
	This document serves as an Oath/Declaration (37 CFR 1.63).

**Total Attachments: 4** 

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**PATENT** REEL: 036389 FRAME: 0125

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Invention	MEMORY CONTROLLER, STORAGE DEVICE AND DECODING METHOD
As the below name	d inventor, I hereby declare that:
This declaration 🗵	The attached application, or
is directed to:	United States application or PCT international application number
The above-identifie	d application was made or authorized to be made by me.
I believe that I am t	he original inventor or an original joint inventor of a claimed invention in the application.
	ushiki Kaisha Toshiba I to as "ASSIGNEE") having places of business at: <u>1-1, Shibaura 1-chome, Minato-ku, Tokyo</u>
105-8001 Japan, is Letters Patent that foreign countries;	desirous of acquiring the entire right, title and interest in and to said invention and in and to any may be granted therefore in the United States and its territorial possessions and in any and all
acknowledged, and said ASSIGNEE, th and in all foreign co other relevant Inter- interest in and to a	FORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby for other good and valuable consideration, I, by these presents do sell, assign and transfer unto be full and exclusive right to the said invention in the United States and its territorial possessions countries (including the right to claim priority under the terms of the International Convention and national Treaties and Arrangements from the aforesaid application) and the entire right, title and my and all Letters Patent which may be granted therefor in the United States and its territorial any and all foreign countries and in and to any and all divisions, reissues, continuations, newals thereof.
any and all foreign assignee of my enti- (his) successors and	ze and request the Patent Office Officials in the United States and its territorial possessions and countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the re right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its a signs, to the full end of the term for which said Letters Patent may be granted, as fully and would have been held by me had this Assignment and sale not been made.
respecting said inv continuation, substitutionall of said Letters I possible to aid said	that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me rention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, tute, renewal and reissue applications, execute all necessary assignment papers to cause any and Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said ted States and its territorial possessions and in any and all foreign countries.
I hereby acknowl by fine or imprisonn	ledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 nent of not more than five (5) years, or both.
LEGAL NAME OF	INVENTOR
Inventor: Osamu	amu Torie Date: Oug 5. 2015
	SO II W WILL

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P. ATTORNEYS AT LAW

1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

1048007585

Title of Invention	MEMORY CONTROLLER, STORAGE DE	VICE AND DECODING METHOD
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is directed to:	United States application or PCT international applifiled on	lication number
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	bushiki Kaisha Toshiba d to as "ASSIGNEE") having places of business at: _	1-1, Shibaura 1-chome, Minato-ku, Tokyo
105-8001 Japan, is Letters Patent that foreign countries;	s desirous of acquiring the entire right, title and intermay be granted therefore in the United States and	rest in and to said invention and in and to any its territorial possessions and in any and all
acknowledged, and said ASSIGNEE, the and in all foreign co- other relevant Inter- interest in and to a	FORE, in consideration of the sum of FIVE DOLL if for other good and valuable consideration, I, by the he full and exclusive right to the said invention in the countries (including the right to claim priority under truncational Treaties and Arrangements from the aforest any and all Letters Patent which may be granted the any and all foreign countries and in and to any enewals thereof.	nese presents do sell, assign and transfer unto the United States and its territorial possessions the terms of the International Convention and taid application) and the entire right, title and therefor in the United States and its territorial
any and all foreign assignee of my enti (his) successors and	ize and request the Patent Office Officials in the Un n countries to issue any and all of said Letters Pater ire right, title and interest in and to the same, for the d assigns, to the full end of the term for which said would have been held by me had this Assignment ar	ent, when granted, to said ASSIGNEE as the esole use and behoof of said ASSIGNEE, its deleters Patent may be granted, as fully and
respecting said inv continuation, substi- all of said Letters possible to aid said	that I will communicate to said ASSIGNEE or its vention, and testify in any legal proceeding, sign itute, renewal and reissue applications, execute all represent to be issued to said ASSIGNEE, make all a ASSIGNEE, its (his) successors and assigns, to olited States and its territorial possessions and in any and	n all lawful papers, execute all divisional, eccessary assignment papers to cause any and rightful oaths, and, generally do everything obtain and enforce proper protection for said
	vledge that any willful false statement made in this de ment of not more than five (5) years, or both.	eclaration is punishable under 18 U.S.C. 1001
LEGAL NAME OF	INVENTOR	
Inventor: Haruka	OBATA	Date: Aug, 5, 2015
Signature: 74-av	ruka Obata	

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is directed to:	United States application or PCT international application numberfiled on
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I believe that I am t	he original inventor or an original joint inventor of a claimed invention in the application.
WHEREAS, Kab (hereinafter referred	ushiki Kaisha Toshiba I to as "ASSIGNEE") having places of business at: 1-1, Shibaura 1-chome, Minato-ku, Tokyo
105-8001 Japan, is Letters Patent that foreign countries;	desirous of acquiring the entire right, title and interest in and to said invention and in and to any may be granted therefore in the United States and its territorial possessions and in any and all
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any and all foreign assignee of my entir (his) successors and	ze and request the Patent Office Officials in the United States and its territorial possessions and countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the re right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its d assigns, to the full end of the term for which said Letters Patent may be granted, as fully and would have been held by me had this Assignment and sale not been made.
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by fine or imprisonn	ledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 nent of not more than five (5) years, or both.
LEGAL NAME OF	INVENTOR
Inventor: Ryo YA	MAKI Date: Aug 5. 2015
Signature:	Ryo Yamaki

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P.

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

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Title of Invention MEMORY CONTROLLER, STORAGE DEVICE AND DECODING METHOD
As the below named inventor, I hereby declare that:
This declaration 🗵 The attached application, or
is directed to: United States application or PCT international application number
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.
WHEREAS, Kabushiki Kaisha Toshiba (hereinafter referred to as "ASSIGNEE") having places of business at: 1-1, Shibaura 1-chome, Minato-ku, Tokyo
105-8001 Japan, is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries;
NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I, by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries (including the right to claim priority under the terms of the International Convention and other relevant International Treaties and Arrangements from the aforesaid application) and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof.
I hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my entire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me had this Assignment and sale not been made.
Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.
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.
LEGAL NAME OF INVENTOR
Inventor: Daiki WATANABE Date: A. 5. 26/5.
Signature: Daiki Watarube

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P.

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

1048007585

PATENT REEL: 036389 FRAME: 0130

**RECORDED: 08/21/2015**