04/26/2017 504339488

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4386176

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KEJEN LIN	04/06/2017
TOKUMASA HARA	04/06/2017
HIRONORI UCHIKAWA	04/06/2017
JUAN SHI	04/18/2017
AKIRA YAMAGA	04/06/2017
SHO KODAMA	04/06/2017
KEIRI NAKANISHI	04/06/2017

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:	15459375

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.

Phone: (703) 413-3000 Email: jhorn@oblon.com **Correspondent Name:** OBLON, ET AL. 1940 DUKE STREET Address Line 1:

Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER:	502254US
NAME OF SUBMITTER:	JENNA HORN
SIGNATURE:	/Jenna Horn/
DATE SIGNED:	04/26/2017

PATENT REEL: 042153 FRAME: 0926

504339488

This document serves as an Oath/Declaration (37 CFR 1.63). **Total Attachments: 7** source=502254US_Assignment#page1.tif source=502254US_Assignment#page2.tif source=502254US_Assignment#page3.tif

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source=502254US Assignment#page7.tif

Title of MEM	MORY SYSTEM	
Invention	TORT BIBLE	
As the below named invent	itor, I hereby declare that:	
This declaration The at	••	
is directed to:	ed States application or PCT international application number 15/459,375 on March 15, 2017	
The above-identified applic	ication was made or authorized to be made by me.	
I believe that I am the origi	rinal inventor or an original joint inventor of a claimed invention in the applicatio	n.
	Kaisha Toshiba	
<u>105-8001 Japan</u> , is desirou	"ASSIGNEE") having places of business at: 1-1, Shibaura 1-chome, Minatobus of acquiring the entire right, title and interest in and to said invention and in a granted therefore in the United States and its territorial possessions and in an armonic property.	and to any
acknowledged, and for othe said ASSIGNEE, the full at and in all foreign countries other relevant International interest in and to any and	in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof her good and valuable consideration, I, by these presents do sell, assign and trainand exclusive right to the said invention in the United States and its territorial posts (including the right to claim priority under the terms of the International Convert Treaties and Arrangements from the aforesaid application) and the entire right all Letters Patent which may be granted therefor in the United States and its and all foreign countries and in and to any and all divisions, reissues, continued.	nsfer unto ossessions ention and t, title and territorial
any and all foreign countri assignee of my entire right, (his) successors and assign	request the Patent Office Officials in the United States and its territorial possessies to issue any and all of said Letters Patent, when granted, to said ASSIGN t, title and interest in and to the same, for the sole use and behoof of said ASSIGN is, to the full end of the term for which said Letters Patent may be granted, as have been held by me had this Assignment and sale not been made.	EE as the GNEE, its
respecting said invention, continuation, substitute, ren all of said Letters Patent to possible to aid said ASSIG	will communicate to said ASSIGNEE or its (his) representatives any facts kno, and testify in any legal proceeding, sign all lawful papers, execute all conewal and reissue applications, execute all necessary assignment papers to cause to be issued to said ASSIGNEE, make all rightful oaths, and, generally do eGNEE, its (his) successors and assigns, to obtain and enforce proper protection tes and its territorial possessions and in any and all foreign countries.	divisional, e any and
by fine or imprisonment of i	hat any willful false statement made in this declaration is punishable under 18 U.S not more than five (5) years, or both.	S.C. 1001
LEGAL NAME OF INVEN	NTOR	
Inventor: Kejen LIN	Date: April 6, 2017	
Signature:	Lim	

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

ATTORNEYS AT LAW 1940 DUKE STREET **ALEXANDRIA, VIRGINIA 22314**

> **PATENT** REEL: 042153 FRAME: 0928

Title of

Title of N Invention	MEMORY SYSTEM
As the below named in	nventor, I hereby declare that:
This declaration \(\square\)	The attached application, or
	United States application or PCT international application number 15/459,375 [Iled on March 15, 2017]
The above-identified a	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, Kabush	
105-8001 Japan, is de	o as "ASSIGNEE") having places of business at: <u>1-1, Shibaura 1-chome, Minato-ku, Tokyo</u> esirous of acquiring the entire right, title and interest in and to said invention and in and to any any be granted therefore in the United States and its territorial possessions and in any and all
acknowledged, and fo said ASSIGNEE, the and in all foreign cour other relevant Internat interest in and to any	RE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby or other good and valuable consideration, I, by these presents do sell, assign and transfer unto full and exclusive right to the said invention in the United States and its territorial possessions entries (including the right to claim priority under the terms of the International Convention and tional Treaties and Arrangements from the aforesaid application) and the entire right, title and and all Letters Patent which may be granted therefor in the United States and its territorial my and all foreign countries and in and to any and all divisions, reissues, continuations, wals thereof.
any and all foreign co assignee of my entire (his) successors and a	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 right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its assigns, to the full end of the term for which said Letters Patent may be granted, as fully and could have been held by me had this Assignment and sale not been made.
respecting said inven continuation, substitut all of said Letters Par possible to aid said A	at I will communicate to said ASSIGNEE or its (his) representatives any facts known to me ation, and testify in any legal proceeding, sign all lawful papers, execute all divisional, the renewal and reissue applications, execute all necessary assignment papers to cause any and tent 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 distates and its territorial possessions and in any and all foreign countries.
	lge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 nt of not more than five (5) years, or both.
LEGAL NAME OF IN	VENTOR
Inventor: Tokumasa	HARA Date: Αρτ. 6, 2017
Signature:	Tokumasa Hara

 ${\bf OBLON, McCLELLAND, MAIER \& NEUSTADT, L.L.P.}$

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

Title of M	MEMORY SYSTEM	
Invention		
As the below named in	nventor, I hereby declare that:	
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The above-identified a	application was made or authorized to be made by	y me.
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WHEREAS, Kabush		
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acknowledged, and for said ASSIGNEE, the f and in all foreign coun other relevant Internati interest in and to any	RE, in consideration of the sum of FIVE DOLL or other good and valuable consideration, I, by the full and exclusive right to the said invention in the intries (including the right to claim priority under tional Treaties and Arrangements from the afores and all Letters Patent which may be granted the iny and all foreign countries and in and to an wals thereof.	hese presents do sell, assign and transfer unto he United States and its territorial possessions the terms of the International Convention and said application) and the entire right, title and herefor in the United States and its territorial
any and all foreign co assignee of my entire in (his) successors and as	and request the Patent Office Officials in the Uncountries to issue any and all of said Letters Pateright, title and interest in and to the same, for the saigns, to the full end of the term for which said ould have been held by me had this Assignment a	ent, when granted, to said ASSIGNEE as the se sole use and behoof of said ASSIGNEE, its d Letters Patent may be granted, as fully and
respecting said invent continuation, substitute all of said Letters Pat- possible to aid said As	at I will communicate to said ASSIGNEE or its ation, and testify in any legal proceeding, sigue, renewal and reissue applications, execute all retent to be issued to said ASSIGNEE, make all aSSIGNEE, its (his) successors and assigns, to a distates and its territorial possessions and in any a	in all lawful papers, execute all divisional, necessary assignment papers to cause any and rightful oaths, and, generally do everything obtain and enforce proper protection for said
by fine or imprisonmen	dge that any willful false statement made in this d nt of not more than five (5) years, or both.	eclaration is punishable under 18 U.S.C. 1001
LEGAL NAME OF IN	IVENTOR	
Inventor: Hironori U	CHIKAWA	Date: April 6, 2017
Signature: Him	onori Uchikewa	

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

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

> **PATENT** REEL: 042153 FRAME: 0930

Title of

Title of Invention	MEMORY SYSTEM
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 15/459,375 filed on March 15, 2017
The above-identifie	d application was made or authorized to be made by me.
I believe that I am the	he original inventor or an original joint inventor of a claimed invention in the application.
(hereinafter referred 105-8001 Japan, is	ushiki Kaisha Toshiba d to as "ASSIGNEE") having places of business at: 1-1, Shibaura 1-chome, Minato-ku, Tokyo 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 Interr interest in and to an	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 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.
respecting said inv continuation, substit all 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.
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: Juan SH	Date: April 18, 2017
Signature:	Juan Shi Gha

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

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

Title of MEMORY SYSTEM
Invention
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 15/459,375 filed on March 15, 2017
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: Akira YAMAGA Date: Apr. 6. 2017
Signature: Akira YAMAGA

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

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

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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: Sho KO	DAMA Date: Apr. 6. 2017
Signature: Sho	Kodama

 ${\bf OBLON, McCLELLAND, MAIER \& NEUSTADT, L.L.P.}$

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

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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.
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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: Keiri NAKANISHI Date: Apr., 6, 2017.
Signature: Cini Mahainki

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

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

> PATENT REEL: 042153 FRAME: 0934

1048007187 RECORDED: 04/26/2017