503532437 10/21/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3579063

SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT	
CONVEYING PARTY DA	ΑΤΑ			
		Name	Execution Date	
HARUKA SAKUMA			09/17/2014	
SHUICHI TORIYAMA			09/24/2014	
MASUMI SAITOH			09/17/2014	
YOSHIAKI FUKUZUMI			09/16/2014	
NAOKI YASUDA			09/19/2014	
RECEIVING PARTY DA	ТА			
Name:	1	SHIKI KAISHA TOSHIBA		
Street Address:	1-1, Shibaura 1-chome, Minato-Ku			
City:	Tokyo			
State/Country:	Japan			
Postal Code:	105-8001			
	Total: 1	l l		
PROPERTY NUMBERS Property Type	Total: 1	Number		
	Total: 1			
Property Type Application Number:		Number		
Property Type Application Number: CORRESPONDENCE D		Number 14491385		
Property Type Application Number: CORRESPONDENCE D Fax Number:	ATA	Number 14491385 (703)413-2220	cessful, it will be sent	
Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i>	ATA e sent to	Number 14491385		
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Property Type Application Number: CORRESPONDENCE D Fax Number: Correspondence will be using a fax number, if µ Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	ATA e sent to provideo	Number14491385(703)413-2220o the e-mail address first; if that is unsuccessful, it will be sent via (703) 413-3000MChanthaphone@oblon.comOBLON, ET AL.1940 DUKE STREETALEXANDRIA, VIRGINIA 22314441941US		
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	SEMICONDUCTOR MEMORY DEVICE			
Invention				
As the below named inventor, I hereby declare that:				
This declaration 🔲 The attached application, or				
filed on September				
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.				
<u>105-8001, JAPAN</u> , is desirous of acquin any Letters Patent that may be granted the foreign countries;) having places of business at: <u>1-1</u> , <u>Shibauta 1-chome</u> , <u>Initiato-Ri</u> , <u>Ibyto</u> ing the entire right, title and interest in and to said invention and in and to erefore in the United States and its territorial possessions and in any and all			
acknowledged, and for other good and y said ASSIGNEE, the full and exclusive : and in all foreign countries (including th other relevant International Treaties and interest in and to any and all Letters Pa possessions and in any and all foreign substitutions and renewals thereof.	on of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby aluable consideration, I, by these presents do sell, assign and transfer unto right to the said invention in the United States and its territorial possessions e right to claim priority under the terms of the International Convention and Arrangements from the aforesaid application) and the entire right, title and tent which may be granted therefor in the United States and its territorial a countries and in and to any and all divisions, reissues, continuations,			
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 relssue 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 ASSIGNEB, 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.				
	false statement made in this declaration is punishable under 18 U.S.C. 1001			
LEGAL NAME OF INVENTOR				
Inventor: Haruka SAKUMA	Date: <u>Sep. 17, 2014</u>			
Signature: <u>Haruka Sakam</u>	a			
L				

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P. ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

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NON-VOLATILE SEMICONDUCTOR MEMORY DEVICE Title of 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 14/491,385 filed on September 19, 2014 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 Treatles 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,

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

substitutions and renewals thereof.

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Inventor: Shuichi TORIYAMA Signature:

September 24, 2014

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, L.L.P. ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

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Title of Invention	NON-VOLATILE SEMICONDUCTOR MEMORY DEVICE			
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 <u>14/491,385</u> filed on <u>September 19, 2014</u>			
The above-identified 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,			
WHEREAS, KAI	BUSHIKI KAISHA TOSHIBA			
(hereinafter referred to as "ASSIGNEE") having places of business at: <u>1-1</u> , <u>Shibaura 1-chome</u> , <u>Minato-ku</u> , <u>Tokyo</u> <u>105-8001</u> , <u>JAPAN</u> , 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 assignce 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 caths, and, generally do everything possible to ald 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: Masumi	SAITOH Date: Sep. 17. 2014			
Signature: <u>Ma</u>	cumi Saitoh			

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P. ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

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PATENT REEL: 036843 FRAME: 0172

Title of NON-VOLATILE SEMICONDUCTOR MEMORY DEVICE				
Invention				
As the below named inventor, I hereby declare that:				
This declaration 🔲 The attached application, or				
is directed to: Inited States application or PCT international application number <u>14/491,385</u> filed on <u>September 19,2014</u>				
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.				
WHERBAS, KABUSHIKI KAISHA TOSHIBA				
(hereinafter referred to as "ASSIGNEE") having places of business at: <u>1-1</u> , <u>Shibaura 1-chome</u> , <u>Minato-ku</u> , <u>Tokyo</u> <u>105-8001</u> , <u>JAPAN</u> , 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, J, 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, 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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LEGAL NAME OF INVENTOR				
Inventor: Yoshlaki FUKUZUMI Date: Sap. 16, 2014				
Signature: / Jplia las Pulayani				

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P. ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

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Title of	NON-VOLATILE SEMICONDUCTOR MEMOR	AY DEVICE				
Invention						
As the below named inventor, I hereby declare that:						
This declaration] The attached application, or	4 4 4 9 1 20 5				
	United States application or PCT international application number filed on September 19, 2014	imber [4/491,383				
The above-identifi	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 claim	ned invention in the application.				
WHEREAS, KABUSHIKI KAISHA TOSHIBA (hereinafter referred to as "ASSIGNEE") having places of business at: <u>1-1</u> , <u>Shibaura 1-chome</u> , <u>Minato-ku</u> , <u>Tokyo</u> <u>105-8001</u> , <u>JAPAN</u> , 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:						
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I herebu acku	nowledge that any willful false statement made in this declar somment of not more than five (5) years, or both.	ration is punishable under 18 U.S.C. 1001				
LEGAL NAME	OF INVENTOR.					
Inventor: Naol	ki YASUDA 1	Date: September 19, 201%				
Signature:	Maroki Yasuda					

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, L.L.P. ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

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PATENT REEL: 036843 FRAME: 0174

RECORDED: 10/21/2015