

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4512942

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
MASATSUGU OSHIMI	06/16/2017
YOSHIHIRO OIKAWA	07/03/2017
HIROSHI HIRAYAMA	05/29/2017
JUNJI OGAWA	05/30/2017
RECEIVING PARTY DATA	
Name:	HITACHI, LTD.
Street Address:	6-6, MARUNOUCHI 1-CHOME
Internal Address:	CHIYODA-KU
City:	TOKYO
State/Country:	JAPAN
Postal Code:	100-8280
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15545094
CORRESPONDENCE DATA	
Fax Number:	(215)568-6499
<i>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.</i>	
Phone:	215-568-6400
Email:	lgivigliano@vklaw.com
Correspondent Name:	VOLPE AND KOENIG, P.C.
Address Line 1:	UNITED PLAZA
Address Line 2:	30 SOUTH 17TH STREET, 18TH FLOOR
Address Line 4:	PHILADELPHIA, PENNSYLVANIA 19103
ATTORNEY DOCKET NUMBER:	HITACHI2-341400673US01
NAME OF SUBMITTER:	GERALD B. HALT, JR.
SIGNATURE:	/Gerald B. Halt, Jr./
DATE SIGNED:	07/20/2017
Total Attachments: 4	

source=HITACHI2_341400673US01_Assignment_EFS#page1.tif
source=HITACHI2_341400673US01_Assignment_EFS#page2.tif
source=HITACHI2_341400673US01_Assignment_EFS#page3.tif
source=HITACHI2_341400673US01_Assignment_EFS#page4.tif

(護 渡 証)

IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to me by Hitachi, Ltd., a corporation organized under the laws of Japan, located at 6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8260 Japan receipt of which is hereby acknowledged I do hereby sell and assign to said Hitachi, Ltd., its successors and assigns, all my right, title and interest, in and for the United States of America, in and to

invented by me (if only one is named below) or us (if plural inventors are named below) and described in the application for United States Letters Patent therefor, executed on even date herewith, and all United States Letters Patent which may be granted therefor, and all divisions, continuations and extensions thereof, the said interest being the entire ownership of the said Letters Patent when granted, to be held and enjoyed by said Hitachi, Ltd. its successors, assigns or other legal representatives, to the full end of term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by me or us if this assignment and sale had not been made;

And I do hereby authorize and request the Commissioner of Patents to issue said Letters Patent to said Hitachi, Ltd.,

Date Signed
(署名日)

Jan. 16, 2017

8) _____

REEL: 043055 FRAME: 0629

ASSIGNMENT

(譲 渡 証)

As a below named inventor, I hereby declare that:

IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to me by Hitachi, Ltd.,
a corporation organized under the laws of Japan,
located at 6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8280 Japan
receipt of which is hereby acknowledged I do hereby sell and assign to said Hitachi, Ltd.,
its successors and assigns, all my right, title and interest, in and for the United States of America, in and to

Storage apparatus and non-volatile memory device

invented by me (if only one is named below) or us (if plural inventors are named below) and described in the application for United States Letters Patent therefor, executed on even date herewith, and all United States Letters Patent which may be granted therefor, and all divisions, continuations and extensions thereof, the said interest being the entire ownership of the said Letters Patent when granted,
to be held and enjoyed by said Hitachi, Ltd.
its successors, assigns or other legal representatives, to the full end of term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by me or us if this assignment and sale had not been made;

And I hereby agree to sign and execute any further documents or instruments which may be necessary, lawful, and proper in the prosecution of the above-named application or in the preparation and prosecution of any continuing, continuation-in-part, substitute, divisional, renewal, reviewed or reissue applications or in any amendment, extension, or interference proceedings, or otherwise to secure the title thereto in said assignee;

And I do hereby authorize and request the Commissioner of Patents to issue said Letters Patent to said Hitachi, Ltd.,

Signed on the date(s) indicated aside our signatures:

INVENTOR(S) (発明者フルネームサイン)	Date Signed (署名日)
1) _____ Masatsugu OSHIMI	_____
2) <u>Yoshihiro OIKAWA</u> Yoshihiro OIKAWA	<u>7/3/2017</u>
3) _____ Hiroshi HIRAYAMA	_____
4) _____ Junji OGAWA	_____
5) _____	_____
6) _____	_____
7) _____	_____
8) _____	_____

ASSIGNMENT

(譲 渡 証)

As a below named inventor, I hereby declare that:

IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to me by Hitachi, Ltd.,
a corporation organized under the laws of Japan,
located at 6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8280 Japan
receipt of which is hereby acknowledged I do hereby sell and assign to said Hitachi, Ltd.,
its successors and assigns, all my right, title and interest, in and for the United States of America, in and to

Storage apparatus and non-volatile memory device

invented by me (if only one is named below) or us (if plural inventors are named below) and described in the application for United States Letters Patent therefor, executed on even date herewith, and all United States Letters Patent which may be granted therefor, and all divisions, continuations and extensions thereof, the said interest being the entire ownership of the said Letters Patent when granted,
to be held and enjoyed by said Hitachi, Ltd.
its successors, assigns or other legal representatives, to the full end of term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by me or us if this assignment and sale had not been made;

And I hereby agree to sign and execute any further documents or instruments which may be necessary, lawful, and proper in the prosecution of the above-named application or in the preparation and prosecution of any continuing, continuation-in-part, substitute, divisional, renewal, reviewed or reissue applications or in any amendment, extension, or interference proceedings, or otherwise to secure the title thereto in said assignee;

And I do hereby authorize and request the Commissioner of Patents to issue said Letters Patent to said Hitachi, Ltd.,

Signed on the date(s) indicated aside our signatures:

INVENTOR(S) (発明者フルネームサイン)	Date Signed (署名日)
1) _____ Masatsugu OSHIMI	_____
2) _____ Yoshihiro OIKAWA	_____
3) <u>Hiroshi Hirayama</u> Hiroshi HIRAYAMA	<u>May 29, 2015</u>
4) _____ Junji OGAWA	_____
5) _____	_____
6) _____	_____
7) _____	_____
8) _____	_____

ASSIGNMENT

(譲 渡 証)

As a below named inventor, I hereby declare that:

IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to me by Hitachi, Ltd.,
a corporation organized under the laws of Japan,
located at 6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8280 Japan
receipt of which is hereby acknowledged I do hereby sell and assign to said Hitachi, Ltd.,
its successors and assigns, all my right, title and interest, in and for the United States of America, in and to

Storage apparatus and non-volatile memory device

invented by me (if only one is named below) or us (if plural inventors are named below) and described in the application for United States Letters Patent therefor, executed on even date herewith, and all United States Letters Patent which may be granted therefor, and all divisions, continuations and extensions thereof, the said interest being the entire ownership of the said Letters Patent when granted,
to be held and enjoyed by said Hitachi, Ltd.
its successors, assigns or other legal representatives, to the full end of term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by me or us if this assignment and sale had not been made;

And I hereby agree to sign and execute any further documents or instruments which may be necessary, lawful, and proper in the prosecution of the above-named application or in the preparation and prosecution of any continuing, continuation-in-part, substitute, divisional, renewal, reviewed or reissue applications or in any amendment, extension, or interference proceedings, or otherwise to secure the title thereto in said assignee;

And I do hereby authorize and request the Commissioner of Patents to issue said Letters Patent to said Hitachi, Ltd.,

Signed on the date(s) indicated aside our signatures:

	INVENTOR(S) (発明者フルネームサイン)	Date Signed (署名日)
1)	Masatsugu OSHIMI	
2)	Yoshihiro OIKAWA	
3)	Hiroshi HIRAYAMA	
4)	Junji OGAWA	5/30/2017
5)		
6)		
7)		
8)		