502185904 01/07/2013

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Seiji TODA	12/14/2012
Michio YAMAMOTO	12/14/2012
Masakazu KITAHARA	12/14/2012
Masataka SHITARA	12/14/2012
Takumi KAKUYA	12/14/2012
Kiyotaka SASAKI	12/14/2012
Isao FUJITA	12/14/2012
Satoru ADACHI	12/14/2012
Kenji INOUE	12/14/2012
Nobuhiro SUGAWARA	12/14/2012
Hironori KANNO	12/14/2012

RECEIVING PARTY DATA

Name:	Kabushiki Kaisha Toshiba
Street Address:	1-1 Shibaura 1-Chome
City:	Minato-ku, Tokyo
State/Country:	JAPAN
Postal Code:	105-8001

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13735220

CORRESPONDENCE DATA

Fax Number: 9497609502

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 9797600404
Email: efiling@knobbe.com

Correspondent Name: Knobbe, Martens, Olson & Bear LLP

PATENT

REEL: 029580 FRAME: 0550

DP \$40.00 13735220

502185904

Address Line 1: 2040 Main Street
Address Line 2: 14th Floor

Address Line 4: Irvine, CALIFORNIA 92614

ATTORNEY DOCKET NUMBER: SUTOSH.1211AUS

NAME OF SUBMITTER: Irfan A. Lateef

Total Attachments: 4

source=SUTOSH-1211AUS_Assignment#page1.tif

source=SUTOSH-1211AUS_Assignment#page2.tif

source=SUTOSH-1211AUS_Assignment#page3.tif

source=SUTOSH-1211AUS_Assignment#page4.tif

PATENT REEL: 029580 FRAME: 0551 In consideration of value received, I, having a residence as stated below above my name, the sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are listed below) of an invention described in an application for United States patent entitled:

READ/WRITE APPARATUS AND READ/WRITE METHOD

have sold and assigned and do hereby sell and assign to KABUSHIKI KAISHA TOSHIBA a Japanese corporation, having a business address at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan

its successors, assigns or nominees, hereinafter referred to as "Assignee", my entire right, title and interest in and to said invention as disclosed, shown and described in said United States patent application:

(check one)	[X]	executed concurrently herewith		
	[]	executed on	•	
		Application No.	, filed	;

and in and to all applications for patent and patents for invention including all divisions, reissues, continuations, substitutes and extensions thereof and all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property, including rights of priority, resulting from the filing of any of said applications; and I authorize and request any official whose duty is to issue patents, to issue any patent on said invention or resulting therefrom to said Assignee, and I agree that on request and without further consideration, but at the expense of said Assignee, I will communicate to said Assignee or its representatives all facts known to me respecting said invention and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuing, continued prosecution, reissue, or other applications, make all rightful oaths and declarations, and generally do everything possible to aid said Assignee to obtain and enforce proper patent protection for said invention.

I hereby grant the following law firm the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the Rules of the U.S. Patent and Trademark Office for recordation of this document.

Mr. Irfan Lateef, Knobbe, Martens, Olson & Bear LLP, 2040 Main Street, 14th Floor, Irvine, ${\rm CA}\,92614$

PATENT REEL: 029580 FRAME: 0552

[1st Inventor] Residence Address: Kawasaki-shi, Japan Mailing Address: c/o Intellectual Property Division, To Minato-ku, Tokyo 105-8001, Japan Citizenship: Japan	oshiba Corporation, 1-1, Shibaura 1-chome,	
Leiji Toda	Dec 19, 2012	
Seiji Toda	Date:	
[2nd Inventor] Residence Address: Inagi-shi, Japan Mailing Address: c/o Intellectual Property Division, To Minato-ku, Tokyo 105-8001, Japan Citizenship: Japan	oshiba Corporation, 1-1, Shibaura 1-chome,	
Michio Yamamoto	Dec 14, 2012	
[3rd Inventor] Residence Address: Kunitachi-shi, Japan Mailing Address: c/o Intellectual Property Division, To Minato-ku, Tokyo 105-8001, Japan Citizenship: Japan	oshiba Corporation, 1-1, Shibaura 1-chome,	
Maradam ditahara Masakazu Kitahara	Date:	
[4th Inventor] Residence Address: Machida-shi, Japan Mailing Address: c/o Intellectual Property Division, Toshiba Corporation, 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan Citizenship: Japan		
Mastaka Shitara	Dec 14. 2012	
Masataka Shitara	Date:	
[5th Inventor] Residence Address: Ebina-shi, Japan Mailing Address: c/o Intellectual Property Division, Toshiba Corporation, 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan Citizenship: Japan		
Takumi Kakuya Takumi Kakuya	Date: Dec 14, 2012	

PATENT REEL: 029580 FRAME: 0553

[6th Inventor] Residence Address: Kawasaki-shi, Japan Mailing Address: c/o Intellectual Property Division, T	oshiba Corporation, 1-1, Shibaura 1-chome,
Minato-ku, Tokyo 105-8001, Japan Citizenship: Japan	
Kiyotaka Sasaki	Dec 14, 2012
Kiyotaka Sasaki	Date:
[7th Inventor] Residence Address: Yokohama-shi, Japan Mailing Address: c/o Intellectual Property Division, T Minato-ku, Tokyo 105-8001, Japan Citizenship: Japan	oshiba Corporation, 1-1, Shibaura 1-chome,
Isao Fujita Isao Fujita	Dec 14, 20/2 Date:
Isao Fujita	Date:
[8th Inventor] Residence Address: Kawasaki-shi, Japan Mailing Address: c/o Intellectual Property Division, T Minato-ku, Tokyo 105-8001, Japan Citizenship: Japan	
Satoru Adachi Satoru Adachi	Dec 14, 20/2
Satoru Adachi	Date:
[9th Inventor] Residence Address: Kamakura-shi, Japan Mailing Address: c/o Intellectual Property Division, T Minato-ku, Tokyo 105-8001, Japan Citizenship: Japan	oshiba Corporation, 1-1, Shibaura 1-chome,
Kenji Inoue	Dec 14, 2012
Kenji Inoue	Date:
[10th Inventor] Residence Address: Yokohama-shi, Japan Mailing Address: c/o Intellectual Property Division, T Minato-ku, Tokyo 105-8001, Japan Citizenship: Japan	oshiba Corporation, 1-1, Shibaura 1-chome,
Nobuhiro Sugarara	Dec 14, 2012.
Nobuhiro Sugawara	Date:

ASSIGNMENT

AGG063842-USA-A (12S0887)

[11th Inventor]

Residence Address: Fussa-shi, Japan

Mailing Address: c/o Intellectual Property Division, Toshiba Corporation, 1-1, Shibaura 1-chome,

Minato-ku, Tokyo 105-8001, Japan

Citizenship: Japan

Hironori Kanno

Date:

PATENT REEL: 029580 FRAME: 0555

1048001225

RECORDED: 01/07/2013