504471129 07/24/2017

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TAKEYORI HARA	07/14/2017

RECEIVING PARTY DATA

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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15455036

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NAME OF SUBMITTER:	FREDERICK D. KIM
SIGNATURE:	/Frederick D. Kim/
DATE SIGNED:	07/24/2017

Total Attachments: 2

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> **PATENT** REEL: 043083 FRAME: 0501 504471129

ASSIGNMENT

WHEREAS, the undersigned inventor(s) (hereinafter referred to as "INVENTOR(S)") desire(s) to transfer to Kabushiki Kaisha Toshiba (hereinafter referred to as "TOSHIBA") a corporation duly organized and existing under the laws of Japan, with offices at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, all right, title and interest in and to the inventions disclosed in the following Invention Disclosure Form(s):

 "DISK DRIVE THAT EFFICIENTLY HANDLES RANDOM MIXED-R/W COMMAND-STREAMS" submitted by Richard M. Ehrlich;

And such inven	tions which it now of hereafter are disclosed in the patent application(s).
(a) 🗌	U.S. patent application executed on,
(b) 🔀	U.S. application no. <u>15/455,036</u> filed on <u>March 9, 2017</u> ,
(c) 🗌	International (e.g., PCT, JP) application nofiled on,
(collectively	v. the "INVENTIONS"):

Now, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, INVENTOR(S) hereby sell(s), assign(s) and transfer(s) to TOSHIBA the entire right, title and interest for the United States and its territorial possessions, and in all foreign countries, in and to the INVENTIONS and any and all improvements thereon which are the subject of the INVENTIONS, and in and to any U.S. or foreign patent application for such INVENTIONS and improvements and any legal equivalent thereof in a foreign country, including the right to claim priority, and in and to any division, continuation or continuation-in-part, renewal or substitute thereof, and in and to all resulting Letters Patents or any reissue, reexamination certificate, supplemental examination certificate, post grant review certificate, inter partes review certificate, or otherwise, thereof, to have and to hold the same to the full end of the term or terms for which any and all of said Letters Patent may be granted (collectively, the "ASSIGNED INVENTIONS");

INVENTOR(S) authorize and request the issuing authority to issue any and all patents on said application or applications to TOSHIBA or its successors and assigns;

INVENTOR(S) hereby covenant that INVENTOR(S) has/have the full power to make this assignment, and that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment; and

Without further payment or compensation by TOSHIBA or their successors and assigns, INVENTOR(S) further covenant(s) and agree(s) to communicate to TOSHIBA, their representatives, agents, their successors or their assigns, or to subsequent assignees of the ASSIGNED INVENTIONS, any facts relating to the ASSIGNED INVENTIONS including evidence for purposes of interference or derivation proceedings or other administrative or legal proceedings whenever requested; to testify in any interference derivation, legal or administrative proceedings whenever requested; to execute and deliver, on request, all lawful papers required to make any of the foregoing provisions effective; and to do everything possible to aid TOSHIBA, their successors, assigns, nominees, or to subsequent assignees of the ASSIGNED INVENTIONS to secure, obtain and enforce proper patent protection for the ASSIGNED INVENTIONS in this or any foreign country.

Any attorney of record for TOSHIBA, and its successors and assigns, at the direction of TOSHIBA is authorized and requested by the execution of this assignment to insert into this assignment any further patent or patent application information in the blanks and check boxes above as necessary for recordation of this document.

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ASSIGNMENT

	VITNESS WHEREOF, the INVENTOR e below written.	(S) has/have hereunto affixed his/her/the	ir signatures on the
1)	Takeyunt 7 Hwa (Signature)	Takeyori Hara (Type or Print Name)	July 14,2017 (Date)
,	K	awasaki Kanagawa, Japan (<i>Residence</i> Address)	

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PATENT REEL: 043083 FRAME: 0503