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PATENTS ONLY

Atty Ref/Docket No.: 2201.032US1

Patent and Trademark Office

To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Toshiba America Information Systems, Inc.

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

2. Name and address of receiving party(ies):

Name: Kabushiki Kaisha Toshiba

Street Address: 1-1, Shibaura 1-Chome

Minatoku Tokyo 105-8001 Japan

3. Nature of conveyance:

Additional name(s) & address(es) attached? ☐ Yes ☒ No☒ Assignment ☐ Merger☐ Security Agreement ☐ Change of Name☐ OtherExecution Date: August 29, 2008

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

B. Patent No.(s)

Serial No. 12/052,480, filed March 20, 2008

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Garth Vivier

Address:

Schwegman, Lundberg & Woessner, P.A.

P.O. Box 2938

Minneapolis, MN 55402-0938

6. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41): \$ 40.00☐ Enclosed☒ Authorized to be charged to deposit account
19-0743

8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743

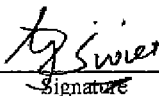
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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Garth Vivier/Reg. No. 57,313

Name of Person Signing


Signature09.04.2008

Date

Total number of pages including cover sheet: 4

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks

Mail Stop Assignment Recordation Services

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PATENT

700383401

REEL: 021488 FRAME: 0194

CH \$40.00 190743 12052480

ASSIGNMENT

WHEREAS, Toshiba America Information Systems, Inc., a corporation organized and existing under and by virtue of the laws of the State of California, and having an office and place of business at 9740 Irvine Boulevard, Irvine, CA 92618-1697 has acquired the entire right, title and interest in and to the inventions, improvements and application and in and to the Letters Patent to be obtained therefor, by virtue of an Assignment from the inventors filed on June 18, 2008, together with the Application for United States Letters Patent which application was assigned U.S. patent application serial number 12/052,480, and filed on March 20, 2008 and is entitled Low Track-Per-Inch (TPI) Zone with Reduced Need for Adjacent-Track-Erasure (ATE) Refresh.

Kabushiki Kaisha Toshiba

AND WHEREAS, Toshiba Corporation, a corporation organized and existing under and by virtue of the laws of Japan, and having an office and place of business at 1-1, Shibaura 1-Chome, Minatoku, Tokyo 105-8001 Japan (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, continuations-in-part, or renewals thereof, all Letters Patent which may be granted there from, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted there from; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

Asst. Macabe 8/29/08

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore, we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 15th day of

July, 2008.

Scott Maccabe

Scott Maccabe
Vice President and General Manager, Storage Device Division
Toshiba America Information Systems, Inc.

STATE OF CALIFORNIA
COUNTY OF ORANGE

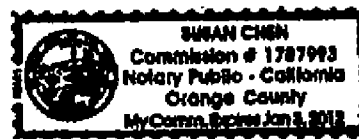
On this 15th day of July, 2008 before me, Susan Chen, Notary Public, personally appeared Scott Maccabe, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person; or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

Susan Chen



(Seal)

ACKNOWLEDGMENT

State of California

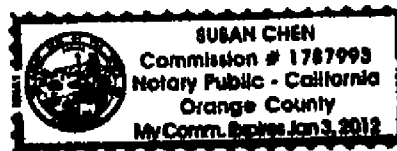
County of OrangeOn August 29, 2008 before me, Susan Chen, Notary Public, personally appeared

Scott Maccabe, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

Susan Chen

(Seal)

SCHWEGMAN ■ LUNDBERG ■ WOESSNER

PATENT, TRADEMARK & COPYRIGHT ATTORNEYS

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Minneapolis, MN 55402

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September 5, 2008Time: 8:14 AM
(Minneapolis, Minn.)TO: Commissioner for Patents
Attn: Assignment Recordation Services
Patent Examining Corps
Facsimile Center
P.O. Box 1450
Alexandria, VA 22313-1450

FROM: Garth Vivier

OUR REF: 2201.032US1

FAX NUMBER 571-273-0140

Documents Transmitted:

Assignment (3 pages), Assignment Recordation Form Cover Sheet (1 page), authorization to charge Deposit Account No. 19-0743 in the amount of \$40.00 to cover the Assignment Recording Fee.

Total pages of this transmission, including cover letter: (5 pgs)

If you do NOT receive all of the pages described above, please telephone us at 612-373-6900 or fax us at 612-339-3061.

In re. Patent Application of: Richard Ehrlich

Examiner:

Serial No.: 12/052,480

Group Art Unit: 2627

Filed: March 20, 2008

Docket No.: 2201.032US1

Title: LOW TRACK-PER-INCH (TPI) ZONE WITH REDUCED NEED FOR ADJACENT-
TRACK-ERASURE (ATE) REFRESH

Please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

By: Garth Vivier

Name: Garth Vivier

Reg. No. 57,313

I hereby certify that this paper is being transmitted by facsimile to the U.S. Patent and Trademark Office on the date shown below.

Carol S. White

Carol S. White

9-5-08

Date