502488416 09/09/2013

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| WILLIAM B. BOYLE | 07/01/2010 |
| ROBERT M. FALLONE | 07/01/2010 |

RECEIVING PARTY DATA

| Name: | WESTERN DIGITAL TECHNOLOGIES, INC. |
|-----------------|------------------------------------|
| Street Address: | 3355 MICHELSON DRIVE, SUITE 100 |
| City: | IRVINE |
| State/Country: | CALIFORNIA |
| Postal Code: | 92612 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13948495 |

CORRESPONDENCE DATA

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Address Line 2: 3355 MICHELSON DRIVE, SUITE 100

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| ATTORNEY DOCKET NUMBER: | T4249.C1 |
|-------------------------|----------------|
| NAME OF SUBMITTER: | Wendy Bobella |
| Signature: | Wendy Bobella/ |
| Date: | 09/09/2013 |

Total Attachments: 3

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> PATENT REEL: 031168 FRAME: 0704

540.00 13948495

Atty. Docket No.: T4249

ASSIGNMENT

Whereas, we, WILLIAM B. BOYLE, a citizen of the United States of America, residing at Lake Forest, California; and ROBERT M. FALLONE a citizen of the United States of America, residing at Laguna Niguel, California, have invented certain new and useful improvements in SYSTEM AND METHOD FOR OPTIMIZING GARBAGE COLLECTION IN DATA STORAGE (hereafter "Improvements") for which we have executed an application for a United States Patent filed June 30, 2010, Application No. 12/827,931 (hereafter "Application"); and

Whereas, Western Digital Technologies, Inc. (hereafter "Assignee"), a Delaware Corporation, desires to acquire the entire right, title, and interest in and to the Improvements and the Application.

Now, therefore, that for good and valuable consideration, the receipt of which is hereby acknowledged, we hereby acknowledge that we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the Assignee, its successors, legal representatives and assignees, the entire right, title, and interest throughout the world in, to and under the Improvements, and the Application and all divisions, renewals and continuations thereof, and all Letters Patent of the United States which may be granted thereof and all reissues and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent which may hereafter be filed for the Improvements in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and we hereby authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patents for the Improvements to the Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

We hereby covenant and agree that we will communicate to the Assignee, its successors, legal representatives and assigns, any facts known to me respecting the Improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and aid the Assignee, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Improvements in all countries.

| Title of Invention: SYSTEM AND METHOD FOR OPTIMIZING GARBAGE COLLECTION IN DATA STORAGE |
|--|
| Wellier 7/1/10 WILLIAM B. BOXLE Date |
| |
| State of California) ss. |
| County of Orange) |
| On July 2016, before me, Irene E. Reynolds, Notary Public, personally appeared WILLIAM'B. BOYLE 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/she executed the same in his/her authorized capacity, and that by his/her 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. Notary Public |
| IRENE E. REYNOLDS COMM. # 1721083 NOTARY PUBLIC CALIFORNIA ORANGE COUNTY My Comm. Expires JAN 27, 2011 |

Atty. Docket No.: T4249

| Title of Invention: SYSTEM AND METHOD FOR OPTIMIZING GARBAGE COLLECTION IN DATA STORAGE |
|--|
| Robert M. FALLONE 7/1/2010 Date |
| State of California)) ss. |
| County of Orange) |
| On July 2010, before me, Irene E. Reynolds, Notary Public, personally appeared ROBERT M. FALL-ONE 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/she executed the same in his/her authorized capacity, and that by his/her 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. |
| RENE E. REYNOLDS COMM. # 1721083 NOTARY PUBLIC CALIFORNIA ORANGE COUNTY My Comm. Expires JAN 27, 2011 |

REEL: 031168 FRAME: 0707