

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>FENG LIU</td> <td>12/08/2011</td> </tr> <tr> <td>TAO PAN</td> <td>12/08/2011</td> </tr> <tr> <td>ZHIGANG BAI</td> <td>12/09/2011</td> </tr> <tr> <td>YUGANG WANG</td> <td>12/08/2011</td> </tr> <tr> <td>SINING MAO</td> <td>12/20/2011</td> </tr> </tbody> </table>		Name	Execution Date	FENG LIU	12/08/2011	TAO PAN	12/08/2011	ZHIGANG BAI	12/09/2011	YUGANG WANG	12/08/2011	SINING MAO	12/20/2011
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FENG LIU	12/08/2011												
TAO PAN	12/08/2011												
ZHIGANG BAI	12/09/2011												
YUGANG WANG	12/08/2011												
SINING MAO	12/20/2011												
RECEIVING PARTY DATA													
Name:	WESTERN DIGITAL (FREMONT), LLC												
Street Address:	44100 OSGOOD ROAD												
City:	FREMONT												
State/Country:	CALIFORNIA												
Postal Code:	94539												
PROPERTY NUMBERS Total: 1													
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13315098</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13315098								
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Application Number:	13315098												
CORRESPONDENCE DATA													
Fax Number:	(949)672-6604												
Phone:	(949) 672-7871												
Email:	renee.quick@wdc.com												
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>													
Correspondent Name:	WESTERN DIGITAL												
Address Line 1:	ATTN: IP LAW DEPARTMENT												
Address Line 2:	3355 MICHELSON DRIVE, SUITE 100												
Address Line 4:	IRVINE, CALIFORNIA 92612												
ATTORNEY DOCKET NUMBER:	F5317												
NAME OF SUBMITTER:	Renee M. Quick												

CH \$40.00 13315098

Total Attachments: 6

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ASSIGNMENT

Whereas, we, **FENG LIU**, a citizen of **United States of America**, residing at **San Ramon, California**; **TAO PAN** a citizen of **United States of America**, residing at **San Jose, California**; **ZHIGANG BAI**, a citizen of **People's Republic of China**, residing at **Milpitas, California**; **YUGANG WANG**, a citizen of **United States of America**, residing at **Milpitas, California**; and **SINING MAO**, a citizen of **United States of America**, residing at **Fremont, California**, have invented certain new and useful improvements in **MAGNETIC RECORDING HEAD WITH NANO SCALE POLE TIP BULGE** (hereafter "Improvements") for which we have executed an application for a United States Patent filed **December 8, 2011**, Application No. **13/315,098** (hereafter "Application"); and

Whereas, **Western Digital (Fremont), LLC** (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.

ASSIGNMENT

PATENT
Atty. Docket No.: F5317

Title of Invention: **MAGNETIC RECORDING HEAD WITH NANO SCALE POLE TIP BULGE**



FENG LIU

12/08/2011

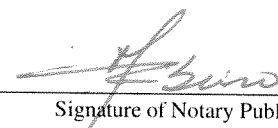
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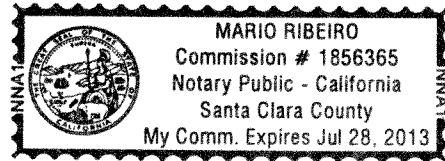
State of California)
) ss.
County of ALAMEDA)

On 12/08/11, before me, MARIO RIBEIRO, Notary Public, personally appeared **FENG LIU** 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: 
Signature of Notary Public



ASSIGNMENT

PATENT
Atty. Docket No.: F5317

Title of Invention: **MAGNETIC RECORDING HEAD WITH NANO SCALE POLE TIP BULGE**


TAO PAN

12/8/2011
Date

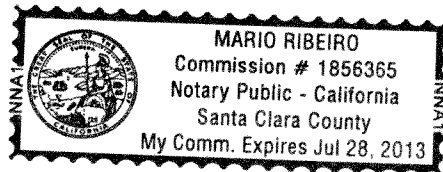
State of California)
) ss.
County of ALAMEDA)

On 12/08/11, before me, MARIO RIBEIRO, Notary Public, personally appeared **TAO PAN** 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.

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WITNESS my hand and official seal.

Signature: 
Signature of Notary Public



ASSIGNMENT

PATENT
Atty. Docket No.: F5317

Title of Invention: **MAGNETIC RECORDING HEAD WITH NANO SCALE POLE TIP BULGE**



ZHIGANG BAI

12/9/11

Date

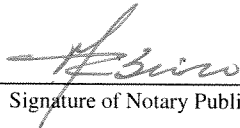
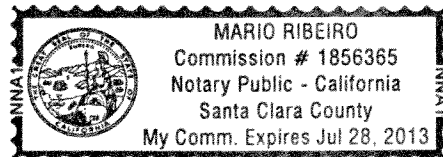
State of California)
) ss.
County of ALAMEDA)

On 12/09/11, before me, MARIO RIBEIRO, Notary Public, personally appeared **ZHIGANG BAI** 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.

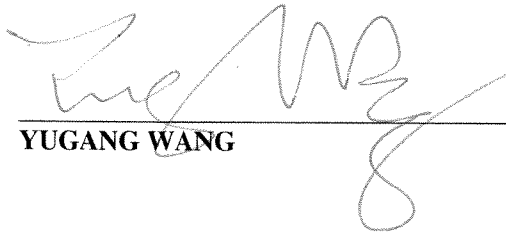
Signature: _____


Signature of Notary Public

ASSIGNMENT

PATENT
Atty. Docket No.: F5317

Title of Invention: **MAGNETIC RECORDING HEAD WITH NANO SCALE POLE TIP BULGE**


YUGANG WANG

12/8/2011
 Date

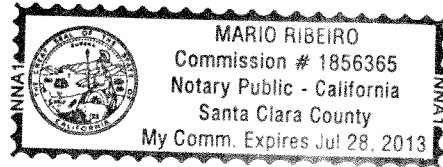
State of California)
) ss.
 County of ALAMEDA)

On 12/08/11, before me, MARIO RIBEIRO, Notary Public, personally appeared **YUGANG WANG** 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: 
 Signature of Notary Public



ASSIGNMENT

PATENT
Atty. Docket No.: F5317

Title of Invention: **MAGNETIC RECORDING HEAD WITH NANO SCALE POLE TIP BULGE**



SINING MAO


Dec 20, 2011
Date

State of California)
) ss.
County of Alameda)

On December 20, 2011, before me, Michelle Bogosian, Notary Public, personally appeared **SINING MAO** 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: 
Signature of Notary Public

