502995018 09/28/2014 PATENT ASSIGNMENT COVER SHEET

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| | | NEW ASSIGNMENT | NEW ASSIGNMENT | |
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| NATURE OF CONVEYANCE: | | ASSIGNMENT | ASSIGNMENT | |
| CONVEYING PARTY D | ATA | | | |
| | | Name | Execution Date | |
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| Property TypeApplication Number:144 | | Number 14499218 | | |
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| Fax Number: <i>Correspondence will be using a fax number, if p</i> Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NU | e sent to provideo | b the e-mail address first; if that is unsuc d; if that is unsuccessful, it will be sent ver- tom.berthold@comcast.net HGST, A WESTERN DIGITAL COMPANY 5600 COTTLE ROAD SAN JOSE, CALIFORNIA 95193 H20141151US1 THOMAS R. BERTHOLD | | |

ASSIGNMENT FOR PATENT APPLICATION

Whereas, I/we the undersigned inventor(s) have invented certain improvements as set forth in the patent application entitled:

TUNNELING MAGNETORESISTIVE (TMR) DEVICE WITH MgD TUNNELING BARRIER LAYER AND NITROGEN-CONTAINING LAYER FOR MINIMIZATION OF BORON DIFFUSION

Whereas, **HGST Netherlands B.V.**, having a place of business at Herikerbergweg 238, Luna ArenA, 1101 CM Amsterdam, The Netherlands (hereinafter referred to as "HGST"), desires to acquire the entire right, title and interest in the said application and invention, and to any United States and foreign patents to be obtained therefore;

Now therefore, for a valuable consideration, receipt whereof is hereby acknowledged, I/we, the above named, hereby sell, assign, and transfer to HGST, its successors and assigns, the entire right, title and interest in the said application and invention therein disclosed for the United States and foreign countries, and all rights of priority resulting from the filing of said United States application, and we request the Commissioner of Patents to issue any Letters Patent granted upon the inventions set forth in said application to HGST, its successors and assigns; and we hereby agree that HGST may apply for foreign Letters Patent on said invention and we will execute all papers necessary in connection with the United States and foreign applications when called upon to do so by HGST.

Signed on the date(s) indicated beside my (our) signature(s).

| 1. Full Name | James Mac Freitag |
|----------------------|-----------------------|
| Inventor's Signature | J. Jus date 9/22/2019 |
| 2. Full Name | Zheng Gao |
| Inventor's Signature | Aug Sat date Arzbany |
| 3. Full Name | |
| Inventor's Signature | date |
| 4. Full Name | |
| Inventor's Signature | date |
| H20141151US1 | |

RECORDED: 09/28/2014