502808900 05/14/2014

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2855494

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------------|----------------|
| JIN REN | 04/28/2014 |
| KEN QING YANG | 04/28/2014 |
| GREGORY EVAN FEDYNYSHYN | 04/28/2014 |

RECEIVING PARTY DATA

| Name: | HGST NETHERLANDS B.V. | |
|-------------------|-----------------------|--|
| Street Address: | HERIKERBERGWEG 328 | |
| Internal Address: | LUNA ARENA | |
| City: | AMSTERDAM | |
| State/Country: | NETHERLANDS | |
| Postal Code: | 1101 CM | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14277492 |

CORRESPONDENCE DATA

Fax Number: (617)526-5000

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via

US Mail.

Email: stephanie.geis@wilmerhale.com

Correspondent Name: WILMERHALE LLP
Address Line 1: 60 STATE STREET

Address Line 4: BOSTON, MASSACHUSETTS 02109

| ATTORNEY DOCKET NUMBER: | 2202374.207US1 | |
|-------------------------|------------------|--|
| NAME OF SUBMITTER: | STEPHANIE GEIS | |
| SIGNATURE: | /STEPHANIE GEIS/ | |
| DATE SIGNED: | 05/14/2014 | |

Total Attachments: 5

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PATENT REEL: 032890 FRAME: 0274

ASSIGNMENT

WHEREAS, we, **Jin Ren**, being a citizen of China, residing at 7 Fairway Road, Acton, Massachusetts 01720; **Ken Qing Yang**, being a citizen of the United States of America, residing at 35D Meadow Tree Farm Road, Saunderstown, Rhode Island 02974; and **Gregory Evan Fedynyshyn**, being a citizen of the United States of America, residing at 32 Atkinson Lane, Sudbury, Massachusetts 01776 (collectively the "Assignor"), are inventors of certain new and useful inventions and discoveries, for which Assignor has made an application for Letters Patent entitled "SYSTEMS AND METHODS FOR CACHE COHERENCE PROTOCOL", also identified as Attorney Docket Number 2202374.00207US1, which patent application has been filed in the United States Patent and Trademark Office; and

WHEREAS, **HGST Netherlands B.V.**, whose business address is Herikerbergweg 328, Luna ArenA, Amsterdam, 1101 CM, Netherlands, and which, together with its successors and assigns is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits, and privileges hereinafter recited;

NOW, THEREFORE, for and in consideration of good and valuable consideration furnished by Assignee to Assignor, receipt and sufficiency of which is hereby acknowledged, Assignor hereby, without reservations agree to:

Assign, transfer, and convey to Assignee the Assignor's entire right, title, and interest in and to said inventions and discoveries, said application for Letters Patent, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, continuation-in-part, and convention applications based in whole, or in part, upon said inventions or discoveries, or upon said applications, and any and all Letters Patents, reissues, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon, or arise from, said inventions, said discoveries, said applications, and said Letters Patent;

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Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under International Conventions or otherwise;

Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments throughout the world to issue or transfer all said Letters Patents to Assignee or otherwise as Assignee may direct;

Warrant that the Assignor has not knowingly conveyed to others any right in said inventions, discoveries, applications, or patents, or any license to use the same, or to make, use, or sell anything embodying or utilizing any of said inventions or discoveries; and that Assignor has good right to assign the same to Assignee without encumbrance;

Bind Assignor and Assignor's heirs and legal representatives, without further consideration, to cooperate with Assignee in the prosecution of said application for Letters Patent and any and all other applications for Letters Patent on said inventions and discoveries, execute, verify, acknowledge and deliver all such further papers, including any and all other applications for Letters Patent on said inventions and discoveries, and instruments of assignment and transfer thereof, and will communicate any facts known to Assignor relating to the inventions and discoveries, to obtain or maintain or enforce said Letters Patent for the inventions and discoveries and improvements therein in any and all countries and to vest title thereto in Assignee. Assignor further agrees that such Assignor will, without further compensation to Assignor during the term of such Assignor's employment by Assignee and thereafter for reasonable compensation as determined by Assignee, perform such other acts as may be reasonably required when requested by Assignee, including attending depositions, preparing and executing declarations and affidavits and testifying as a witness, to obtain or maintain or enforce said Letters Patent for the inventions and discoveries and improvements therein in any and all countries and to vest title thereto in Assignee.

- 2 -

| U.S.S.N. TBA Anomey Docket No: 2202374.00207US1 | |
|--|--|
| | |
| IN TESTIMONY WHEREOF, I have hereunto se April, 2014 (Month/Year). | r my hand and seal this 28 day of |
| | Jin Ren |
| | |
| Commonwealth of Massachusetts)) as. County of) | |
| County of) | |
| Personally appeared before me thisabove-named Jin Ren, who acknowledged that I | day of, the he executed the foregoing instrument as his free |
| act and deed. | |
| | Notary Public |
| | My Commission expires: |
| | |
| | |
| | |
| | |

| IN TESTIMONY WHEREOF April, 261/4 (Month/Yea | ır). | | |
|---|------------|--|--------------------------|
| | Ċ | Ken Qing Yang | |
| State of Rhode Island |) | | |
| County of |) ss.) | | |
| Personally appeared be above-named Ken Qing Yang his free act and deed. | | day of I that he executed the foreg | , the oing instrument as |

Notary Public

My Commission expires:

U.S.S.N. TBA

Attorney Docket No: 2202374.00207US1

| Attorney Docket No: 2202374.002 | 07US1 | |
|---|--------------|---|
| IN TESTIMONY WHEREOF, I have April 2214 (Month/Year). | ; hereunto s | et my hand and scal this 28_day of |
| | | Gregory Evan Fedynyshyn |
| Commonwealth of Massachusetts | | |
| County of |) 38. | |
| Personally appeared before above-named Gregory Evan Fedyny instrument as his free act and deed. | | day of, the acknowledged that he executed the foregoing |
| | | |
| | | Notary Public |
| | | My Commission expires: |

RECORDED: 05/14/2014

U.S.S.N. TBA

REEL: 032890 FRAME: 0279