505073996 08/31/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5120752

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

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------------|----------------|
| CHRISTOPHER S. HALE | 06/08/2015 |
| SAMPATH K. RATNAM | 06/08/2015 |
| KISHORE K. MUCHHERLA | 06/10/2015 |

RECEIVING PARTY DATA

| Name: | MICRON TECHNOLOGY, INC. | |
|-----------------|-------------------------------|--|
| Street Address: | 8000 SOUTH FEDERAL WAY | |
| City: | BOISE | |
| State/Country: | IDAHO | |
| Postal Code: | ostal Code: 83716-9632 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16118901 |

CORRESPONDENCE DATA

Fax Number: (612)659-9344

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

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 612-659-9340 Email: hilden@bipl.net

BROOKS, CAMERON & HUEBSCH, PLLC **Correspondent Name:**

Address Line 1: 1201 MARQUETTE AVENUE SOUTH, SUITE 400

Address Line 4: MINNEAPOLIS, MINNESOTA 55403

| ATTORNEY DOCKET NUMBER: | 1005.0240004[15-001503US] | |
|-------------------------|---------------------------|--|
| NAME OF SUBMITTER: | MARK R. BERGER | |
| SIGNATURE: | /Mark R. Berger/ | |
| DATE SIGNED: | 08/31/2018 | |

Total Attachments: 5

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> **PATENT** REEL: 046766 FRAME: 0824

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PATENT REEL: 046766 FRAME: 0825

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Docket No. 1005.0240001

Christopher S. Hale, et al.

Disclosure No. 2015-0015.00/US

Filed: Concurrently herewith

For: MEMORY HAVING A STATIC CACHE AND A DYNAMIC CACHE

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned does hereby:

SELL, ASSIGN, AND TRANSFER TO Micron Technology, Inc. (the "Assignee"), a corporation of Delaware, having a place of business at 8000 South Federal Way, Boise, Idaho 83716-9632, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent, which has been executed by the undersigned concurrently herewith and is entitled "MEMORY HAVING A STATIC CACHE AND A DYNAMIC CACHE"; such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States of America;

AUTHORIZE AND REQUEST the issuing authority to issue and an all United States and foreign patents granted on such improvements to the Assignee;

PATENT REEL: 046766 FRAME: 0826 ASSIGNMENT Page 2 of 2

Attorney Docket No.: 1005.0240001 [2015-0015.00/US]

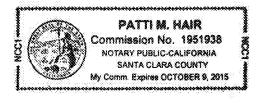
Serial No.: Not Yet Assigned Filing Date: Concurrently Herewith

WARRANT AND CONVENANT that no assignment, grant mortgage, license, or other agreement affecting the right and property herein conveyed has been or will be made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT that, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney, and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for securing, maintaining, and enforcing proper patent protection for such improvements and for vesting title to such improvement in the Assignee;

TO BE BINDING on the heirs, assigns, representatives, and successors of the undersigned and extend to the successors, assigns, and nominees of the Assignee.

| Kishal Kumar - M | Date: 06 10 20 1 |
|---|--|
| Kishore K. Muchherla | |
| STATE OF CALIFORNIA | |
| COUNTY OF Santa Clara | |
| On <u>June 10, 2015</u> | before me, Path in Hair |
| | (insert name and title of the officer) |
| personally appeared , Kishore | |
| subscribed to the within instrument and a | ctory evidence to be the person(s) whose name(s) is/are icknowledged to me that he/she/they executed the same |
| | and that by his/her/their signature(s) on the instrument f which the person(s) acted, executed the instrument. |
| | under the laws of the State of California that the |
| foregoing paragraph is true and correct. | .ik |
| WITNESS my hand and official seal | Actin Sic |
| [SEAL] | Notary or Consular Officer |
| | My Commission Expires October 9, 2015 |



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Christopher S. Hale, et al. Docket No. 1005.0240001

Disclosure No. 2015-0015.00/US

Filed: Concurrently Herewith

For: MEMORY HAVING A STATIC CACHE AND A DYNAMIC CACHE

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned does hereby:

SELL, ASSIGN, AND TRANSFER TO Micron Technology, Inc. (the "Assignee"), a corporation of Delaware, having a place of business at 8000 South Federal Way, Boise, Idaho 83716-9632, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent, which has been executed by the undersigned concurrently herewith and is entitled "MEMORY HAVING A STATIC CACHE AND A DYNAMIC CACHE"; such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States of America;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

Rev. 01/12

PATENT REEL: 046766 FRAME: 0828 ASSIGNMENT Page 2 of 3

Attorney Docket No.: 1005.0240001 [2015-0015.00/US] Sorial No.: Not Yet Assigned

Filing Date: Concurrently Herewith

WARRANT AND CONVENANT that no assignment, grant mortgage, license, or other agreement affecting the right and property herein conveyed has been or will be made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT that, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney, and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for securing, maintaining, and enforcing proper patent protection for such improvements and for vesting title to such improvement in the Assignee;

TO BE BINDING on the heirs, assigns, representatives, and successors of the undersigned and extend to the successors, assigns, and nominees of the Assignee.

[SEAL]

Rev. 01/15

ASSIGNMENT Page 3 of 3 Attorney Docket No.: 1005.0240001 [2015-0015.00/US]

Serial No.: Not Yet Assigned

Filing Date: Concurrently Herewith

WARRANT AND CONVENANT that no assignment, grant mortgage, license, or other agreement affecting the right and property herein conveyed has been or will be made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT that, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney, and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for securing, maintaining, and enforcing proper patent protection for such improvements and for vesting title to such improvement in the Assignee;

TO BE BINDING on the heirs, assigns, representatives, and successors of the undersigned and extend to the successors, assigns, and nominees of the Assignee.

| IN TESTIMONY WHEREOF, I ha 2015. | ve hereunto set my hand this day of, | | |
|--|---|--|--|
| Dangels lan | Date: <u>6/08/2015</u> | | |
| Sampath K. Ratnam | | | |
| STATE OF Jelaho | | | |
| COUNTY OF | | | |
| | | | |
| BEFORE ME, this 8/4 day of 5/2015 personally appeared the above-named | | | |
| individual, to me known to be the person w | ho is described in and who executed the foregoing | | |
| assignment instrument, and acknowledged to me that he/she executed the same of his/her own | | | |
| free will for the purpose therein expressed. | LLI-C | | |
| [Shath s. | Notary or Consular Officer | | |
| 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1 | My Commission Expires//-5-20/7 | | |
| | | | |
| | | | |

Rev. 01/15