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Atty Ref/Docket No.: 303.B48US1	Patent and Trademark Office
To the Director of the U.S. Patent and Trademark Office: Plea	ase record the attached original documents or copy thereof.
1. Name of conveying parties: Haitao Liu, Jian Li, Chandra Mouli Additional name(s) of conveying party(ies) attached?  [ ]Yes [X]No 3. Nature of conveyance:  [X] Assignment [ ] Merger [ ] Security Agreement [ ] Change of Name [ ] Other  Execution Date: January 19, 2011, January 21, 2011,	Additional name(s) & address(es) attached? [ ]Yes [X]Name and name(s) & address(es) attached? [ ]Yes
January 31, 2011  4. Application number(s) or patent number(s):  If this document is being filed together with a new application  A. Patent Application No.  Serial No. 13/020,337, filed February 3, 2011  Additional numbers attached? [ ]Yes [X]No	n, the execution date of the application is:  B. Patent No.(s)
5. Name and address of party to whom correspondence concerning document should be mailed:  Name: David C. Peterson  Address: Schwegman, Lundberg & Woessner, P.A. P.O. Box 2938 Minneapolis, MN 554020938	<ul> <li>6. Total number of applications and patents involved: 1</li> <li>7. Total fee (37 CFR 3.41):\$ 40.00</li> <li>[]Enclosed</li> <li>[X]Authorized to be charged to deposit account 19-0743</li> <li>8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743</li> </ul>
DO NOT USE	THIS SPACE
9. Statement and signature. To the best of my knowledge and belief, the foregoing inform of the original document.  David C. Peterson/Reg. No. 47,857  Name of Person Signing	1/13/2012   Signature   Date
Tota	al number of pages including cover sheet: 6

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks Mail Stop Assignment Recordation Services P.O. Box 1450 Alexandria, VA 22313-1450

Attorney Docket No. 303.B48US1 Client Ref. No. 2010-0307.00/US

## **ASSIGNMENT**

WHEREAS, We, Haitao Liu, residing at 1725 E. Fireside Ct., Meridian, ID 83642, and Jian Li, residing at 2357 S. Petra Ave, Boise, ID 83709, and Chandra Mouli, residing at 727 S. Granite, Boise, ID 83712, made certain new and useful inventions and improvements which are described in an application for U.S. Letters Patent entitled MEMORY DEVICES WITH A CONNECTING REGION HAVING A BAND GAP LOWER THAN A BAND GAP OF A BODY REGION;

WHEREAS, We hereby authorize and request the attorneys, representing Micron Technology, Inc. on this application, at Schwegman, Lundberg & Woessner, P.A., located at 121 South Eighth Street, Suite 1600, Minneapolis, MN 55402, to insert here in parentheses (Ser. No. 13/020,337; Filing Date: February 3,2011) the filing date and application number of said application when known.

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

SELL, ASSIGN AND TRANSFER to Micron Technology, Inc. (the "Assignee"), a corporation of the State of Delaware, having a place of business at 8000 So. Federal Way, Boise, ID 83716-9632, the entire right, title and interest for the United States and all foreign countries in and to: any and all inventions and improvements which are disclosed in the identified application for U.S. Letters Patent, and which may be further identified below; 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 (including all provisional and non-provisional applications), and in all foreign countries on any of such inventions and/or improvements (including any applications for utility models); all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions and/or improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and to claim priority based on the identified application;

AUTHORIZE AND REQUEST that any attorney associated with U.S. PTO Customer No. 73115 may (directly or through his/her designee) delete, insert, or alter any information identifying this application, or any related application, below, after execution of this Assignment;

## Additional Application Information

No Provisional claim for priority is being made at this time.

No U.S. Non-Provisional claim for priority is being made at this time.

No International or foreign claim for priority is being made at this time.

ASSIGNMENT Docket No: 303.B48US1

Client Ref. No. 2010-0307.00/US Assignors: Haitao Liu et al.

Title: MEMORY DEVICES WITH A CONNECTING REGION HAVING A BAND GAP LOWER THAN A BAND GAP OF A

BODY REGION Page 2 of 5

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

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

COVENANT, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the undersigned will (1) execute all provisional, non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers; (3) communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; (4) cooperate with the Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the applications or patents for such improvements; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such improvements in the Assignee, or for securing, maintaining and enforcing proper patent protection for such improvements;

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned, and is to extend to the benefit of the successors, assigns and nominees of the Assignee.

AGREED as of the date of my signature below:

612-339-3061

1/16/2012 10:20:55 AM

6/008

Fax Server

Docket No: 303.B48US1

ASSIGNMENT

Client Ref. No. 2010-0307.00/US

Assignors: Haitao Liu et al.

Title: MEMORY DEVICES WITH A CONNECTING REGION HAVING A BAND GAP LOWER THAN A BAND GAP OF A

**BODY REGION** 

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IN TESTIMONY WHEREOF, I have hereunto set my hand this 19th day of 5 are 2011.

Haitao Liu

COUNTY OF \_

On this \_\_\_\_\_day of \_\_\_\_\_day of \_\_\_\_\_before me personally appeared Haitao Liu, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the

uses and purposes therein set forth.

Notary Public ext: 2/20/2012

**PATENT** 

REEL: 027549 FRAME: 0026

612-339-3061

1/16/2012 10:20:55 AM

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Docket No: 303.B48US1

ASSIGNMENT

Client Ref. No. 2010-0307.00/US

Assignors: Haitao Liu et al.

Title: MEMORY DEVICES WITH A CONNECTING REGION HAVING A BAND GAP LOWER THAN A BAND GAP OF A

**BODY REGION** Page 4 of 5

> IN TESTIMONY WHEREOF, I have hereunto set my hand this 2/ day of Jan . 2011.

> > Jian Li

7/008

COUNTY OF

On this 2151 day of 52, 2011 before me personally appeared Jian Li, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

21 CE Notary Public 4P. 2/28/2012

612-339-3061 1/16/2012 10:20:55 AM

Fax Server

Docket No: 303.B48US1

ASSIGNMENT

Client Ref. No. 2010-0307.00/US Assignors: Haitao Liu et al.

Title: MEMORY DEVICES WITH A CONNECTING REGION HAVING A BAND GAP LOWER THAN A BAND GAP OF A

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IN TESTIMONY WHEREOF, I have hereunto set my hand this 31 day of

Chandra Mouli

8/008

STATE OF \_\_\_\_\_\_ Ada\_\_\_\_

On this 31st day of Sauray, 2011 before me personally appeared Chandra Mouli, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

Notary Public

Aprins: 2/28/2012

**PATENT** 

**REEL: 027549 FRAME: 0028**