

## PATENT ASSIGNMENT

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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>Keith R. Schakel</td> <td>07/24/2007</td> </tr> <tr> <td>Suresh Natarajan Rajan</td> <td>07/24/2007</td> </tr> <tr> <td>Michael John Sebastian Smith</td> <td>07/24/2007</td> </tr> <tr> <td>David T. Wang</td> <td>07/23/2007</td> </tr> </tbody> </table>		Name	Execution Date	Keith R. Schakel	07/24/2007	Suresh Natarajan Rajan	07/24/2007	Michael John Sebastian Smith	07/24/2007	David T. Wang	07/23/2007
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RECEIVING PARTY DATA											
Name:	MetaRAM, Inc.										
Street Address:	181 Metro Drive										
Internal Address:	Suite 400										
City:	San Jose										
State/Country:	CALIFORNIA										
Postal Code:	95110										
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>11929631</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	11929631						
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CORRESPONDENCE DATA											
Fax Number:	(877)769-7945										
Phone:	(202) 626-7703										
Email:	apsi@fr.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:	I-Wei Hsieh										
Address Line 1:	FISH & RICHARDSON P.C.										
Address Line 2:	P.O.BOX 1022										
Address Line 4:	MINNEAPOLIS, MINNESOTA 55440-1022										
ATTORNEY DOCKET NUMBER:	16113-1933002										
NAME OF SUBMITTER:	Lori L. Stewart										
Total Attachments: 2 source=Assignment to MetaRAM#page1.tif source=Assignment to MetaRAM#page2.tif											

CH \$40.00 11929631

**ASSIGNMENT FOR APPLICATION FOR PATENT**

**WHEREAS:**

**Keith R. SCHAKEL**, residing at  
6238 Running Springs Rd.  
San Jose, CA 95135

**Suresh Natarajan RAJAN**, residing at  
3284 Isadora Dr.  
San Jose, CA 95132

**Michael John Sebastian SMITH**, residing at  
825 Ilima Ct.  
Palo Alto, CA 94306

**David T. WANG**, residing at  
727 Opal Dr. #3  
San Jose, CA 95117

(hereinafter referred to as Assignors), have invented a certain invention entitled:

**METHOD AND APPARATUS FOR REFRESH MANAGEMENT OF MEMORY MODULES**

enclosed herewith or for which application for Letters Patent in the United States was filed on \_\_\_\_\_, under Serial No. \_\_\_\_\_, and

WHEREAS, MetaRAM, Inc., a corporation of the State of Delaware, having a place of business at 181 Metro Dr., Suite 400, San Jose 95110 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said application (hereinafter referred to as Application), and the invention disclosed therein (hereinafter referred to as Invention), and in and to all embodiments of the Invention, heretofore conceived, made or discovered by said Assignors, and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter referred to as Patents) thereon granted in any and all countries and groups of countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a conventional, division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.



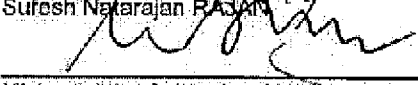
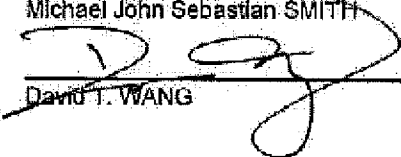
2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or

desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, conventional, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any of said Patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any application therefore and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.

4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

1)	<u>July 24</u> , 2007	 Keith R. SCHAKEL
2)	<u>July 24</u> , 2007	 Suresh Natarajan RAJAN
3)	<u>over 24</u> , 2007	 Michael John Sebastian SMITH
4)	<u>July 23</u> , 2007	 David T. WANG