

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

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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<table border="1"> <tr> <td>Name:</td> <td>MetaRAM, Inc.</td> </tr> <tr> <td>Street Address:</td> <td>181 Metro Drive</td> </tr> <tr> <td>Internal Address:</td> <td>Suite 400</td> </tr> <tr> <td>City:</td> <td>San Jose</td> </tr> <tr> <td>State/Country:</td> <td>CALIFORNIA</td> </tr> <tr> <td>Postal Code:</td> <td>95110</td> </tr> </table>		Name:	MetaRAM, Inc.	Street Address:	181 Metro Drive	Internal Address:	Suite 400	City:	San Jose	State/Country:	CALIFORNIA	Postal Code:	95110
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PROPERTY NUMBERS Total: 1													
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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 94308

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.



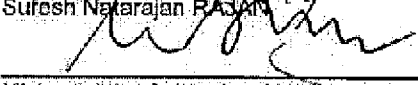
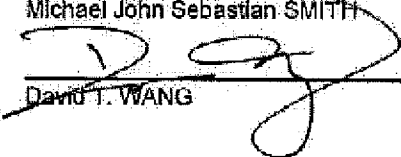
2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt 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 28</u>	, 2007	 _____ Michael John Sebastian SMITH
4)	<u>July 23</u>	, 2007	 _____ David T. WANG