

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
Ramtron International Corporation	04/13/2004
Enhanced Memory Systems, Inc.	04/13/2004
RECEIVING PARTY DATA	
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PROPERTY NUMBERS Total: 1	
Property Type	Number
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ATTORNEY DOCKET NUMBER:	07-391-US-CON
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Total Attachments: 7
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ASSIGNMENT OF PATENT RIGHTS

For good and valuable consideration, the receipt of which is hereby acknowledged, **Ramtron International Corporation** and **Enhanced Memory Systems, Inc.**, each having offices at 1850 Ramtron Drive, Colorado Springs, Colorado 80921 (*together, "Assignor"*), do hereby sell, assign, transfer and convey unto **Purple Mountain Server LLC**, a Delaware limited liability company, having an office at 171 Main Street, #271, Los Altos, California 94022 (*"Assignee"*) or its designees, all of Assignor's right, title and interest in and to: the patent applications and patents listed below, any patents, registrations, or certificates of invention issuing on any patent applications listed below, the inventions disclosed in any of the foregoing, any and all counterpart United States, international and foreign patents, applications and certificates of invention based upon or covering any portion of the foregoing, and all reissues, re-examinations, divisionals, renewals, extensions, provisionals, continuations and continuations-in-part of any of the foregoing (collectively "*Patent Rights*"):

<u>Patent or Application No.</u>	<u>Country</u>	<u>Filing Date</u>	<u>Assignor</u>	<u>Title Inventor(s)</u>
Pat. 5,104,822 (RAM 317)	U.S.	07/30/1990	RAM	Method For Creating Self-Aligned, Non-Patterned Contact Areas And Stacked Capacitors Using The Method Butler
Pat. 5,162,890 (RAM 317 DIV)	U.S.	04/05/1991	RAM	Stacked Capacitor With Sidewall Insulation Butler
Pat. 2673615 (RAM 317 JPN)	Japan	07/30/1991	RAM	Method For Creating Self-Aligned, Non-Patterned Contact Areas And Stacked Capacitors Using The Method Butler
Pat. 5,170,242 (RAM 319 CON)	U.S.	05/10/1991	RAM	Reaction Barrier For A Multilayer Structure In An Integrated Circuit Stevens, Maekawa
Pat. 2075540 (RAM 319 JPN)	Japan	07/13/1990	RAM	Reaction Barrier For A Multilayer Structure In An Integrated Circuit Stevens, Maekawa
Pat. 5,075,817 (RAM 320)	U.S.	6/22/1990	RAM	Trench Capacitor For Large Scale Integrated Memory Butler
Pat. 2089169 (RAM 320 JPN)	Japan	06/21/1991	RAM	Trench Capacitor For Large Scale Integrated Memory Butler

Pat. 5,610,099 (RAM 321)	U.S.	06/28/1994	RAM	Process For Fabricating Transistors Using Composite Nitride Structure Stevens, Bailey, Taylor
Pat. 5,043,790 (RAM 322)	U.S.	04/05/1990	RAM	Sealed Self Aligned Contacts Using Two Nitrides Process Butler
Pat. 5,216,281 (RAM 322 CIP)	U.S.	08/26/1991	RAM	Sealed Self Aligned Contact Incorporating A Dopant Source Butler
Pat. 2005865 (RAM 322 JPN)	Japan	04/05/1991	RAM	Sealed Self Aligned Contacts Using Two Nitrides Process Butler
Pat. 5,134,310 (RAM 324)	U.S.	01/23/1991	RAM	Current Supply Circuit For Driving High Capacitance Load In An Integrated Circuit Mobley, Eaton
Pat. 2932122 (RAM 324 JPN)	Japan	01/23/1992	RAM	Current Supply Circuit For Driving High Capacitance Load In An Integrated Circuit Mobley, Eaton
Pat. 5,117,177 (RAM 325)	U.S.	01/23/1991	RAM	Reference Generator For An Integrated Circuit Eaton
Pat. 3106216 (RAM 325 JPN)	Japan	01/23/1992	RAM	Reference Generator For An Integrated Circuit Eaton
Pat. 5,255,222 (RAM 326)	U.S.	01/23/1991	RAM	Output Control Circuit Having Continuously Variable Drive Current Eaton
Pat. 3136424 (RAM 326 JPN)	Japan	01/22/1992	RAM	Output Control Circuit Having Continuously Variable Drive Current Eaton
Pat. 5,699,317 (RAM 343 CIP)	U.S.	10/06/1994	EMS	Enhanced Dram With All Reads From On-Chip Cache And All Writes To Memory Array Mobley, Sartore, Carrigan, Jones
Pat. 5,721,862 (RAM 343 CON)	U.S.	06/02/1995	EMS	Enhanced Dram With Single Row SRAM Cache For All Device Read Operations Mobley, Sartore, Carrigan, Jones
Pat. 69324508.5 (RAM 343 DE)	Germany	01/14/1993	EMS	Edram With Embedded Registers Mobley, Sartore, Carrigan, Jones

Pat. 5,887,272 (RAM 343 DIV)	U.S.	07/03/1997	EMS	Enhanced Dram With Embedded Registers Mobley, Sartore, Carrigan, Jones
Pat. 6,347,357 (RAM 343 DIV/CON)	U.S.	10/30/1998	EMS	Enhanced Dram With Embedded Registers Mobley, Sartore, Carrigan, Jones
App. 09/962,287 (RAM 343 DIV/CN2)	U.S.	09/24/2001	EMS	Enhanced Dram With Embedded Registers Mobley, Sartore, Carrigan, Jones
Pat. 2851503 (RAM 343 JPN)	Japan	01/21/1993	EMS	EDRAM Having A Dynamically-Sized Cache Memory And Associated Method Mobley, Sartore, Carrigan, Jones
Pat. 5,566,318 (RAM 381)	U.S.	08/02/1994	RAM	Circuit With A Single Address Register That Augments A Memory Controller By Enabling Cache Reads And Page-Mode Writes Joseph
Pat. 5,835,442 (RAM 393)	U.S.	03/22/1996	EMS	EDRAM With Integrated Generation And Control Of Write Enable And Column Latch Signals And Method For Making Same Joseph, D.N. Heisler, D.J. Heisler
Pat. 5,991,851 (RAM 417)	U.S.	05/02/1997	EMS	Enhanced Signal Processing Random Access Memory Device Utilizing A Dram Memory Array Integrated With An Associated SRAM Cache And Internal Refresh Control Alwais, Mobley
Pat. 5,901,100 (RAM 418)	U.S.	04/01/1997	RAM	First-In, First-Out Integrated Circuit Memory Device Utilizing A Dynamic Random Access Memory Array For Data Storage Implemented In Conjunction With An Associated Static Random Access Memory Cache Taylor
Pat. 6,072,741 (RAM 418 CIP)	U.S.	03/11/1999	RAM	First-In, First-Out Integrated Circuit Memory Device Utilizing A Dynamic Random Access Memory Array For Data Storage Implemented In Conjunction With An Associated Static Random Access Memory Cache Taylor
Pat. 6,172,927 (RAM 418 CIP2)	U.S.	03/24/2000	RAM	First-In, First-Out Integrated Circuit Memory Device Incorporating A Retransmit Function Taylor

Pat. 6,141,281 (RAM 429)	U.S.	04/29/1998	EMS	Technique For Reducing Element Disable Fuse Pitch Requirements In An Integrated Circuit Device Incorporating Replaceable Circuit Elements Mobley, Ash
Pat. 6,055,192 (RAM 430)	U.S.	09/03/1998	EMS	Dynamic Random Access Memory Word Line Boost Technique Employing A Boost-On-Writes Policy Mobley
Pat. 6,064,620 (RAM 432)	U.S.	07/08/1998	EMS	Multi-Array Memory Device, And Associated Method, Having Shared Decoder Circuitry Mobley
Pat. 6,278,646 (RAM 432 CIP)	U.S.	03/23/2000	EMS	Multi-Array Memory Device And Associated Method Having Shared Decoder Circuitry Mobley
Pat. 5,963,481 (RAM 447)	U.S.	06/30/1998	EMS	Embedded Enhanced DRAM And Associated Method Alwais, Peters
App. 99302956.0 (RAM 447 EPO)	Europe	04/16/1999	EMS	Embedded Enhanced DRAM And Associated Method Alwais, Peters
Pat. 6,249,840 (RAM 448)	U.S.	10/23/1998	EMS	Multi-Bank Esdram With Cross-Coupled SRAM Cache Registers Peters
Pat. 6,330,636 (RAM 450)	U.S.	01/25/1999	EMS	Double Data Rate Synchronous Dynamic Random Access Memory Device Incorporating A Static RAM Cache Per Memory Bank Bondurant, Peters, Mobley
Pat. 6,151,236 (RAM 460)	U.S.	02/29/2000	EMS	Enhanced Bus Turnaround Integrated Circuit Dynamic Random Access Memory Device Bondurant, Fisch, Grieshaber, Mobley, Peters
Pat. 6,301,183 (RAM 460 CON)	U.S.	07/27/2000	EMS	Enhanced Bus Turnaround Integrated Circuit Dynamic Random Access Memory Device Bondurant, Fisch, Grieshaber, Mobley, Peters
App. 2001-052888 (RAM 460 JPN)	Japan	02/27/2001	EMS	Enhanced Bus Turnaround Integrated Circuit Dynamic Random Access Memory Device Bondurant, Fisch, Grieshaber, Mobley, Peters

Pat. 6,392,441 (RAM 461)	U.S.	06/13/2000	EMS	Fast Response Circuit Moscaluk
Pat. 6,373,751 (RAM 463)	U.S.	05/15/2000	EMS	Packet-Based Integrated Circuit Dynamic Random Access Memory Device Incorporating An On-Chip Row Register Cache To Reduce Data Access Latencies Bondurant
Pat. 6,549,472 (RAM 463 CON)	U.S.	02/21/2002	EMS	Packet-Based Integrated Circuit Dynamic Random Access Memory Device Incorporating An On-Chip Row Register Cache To Reduce Data Access Latencies Bondurant
Pat. 6,646,928 (RAM 463 DIV)	U.S.	01/16/2003	EMS	Packet-Based Integrated Circuit Dynamic Random Access Memory Device Incorporating An On-Chip Row Register Cache To Reduce Data Access Latencies Bondurant
Pat. 6,501,698 (RAM 464)	U.S.	11/01/2000	EMS	Structure And Method For Hiding DRAM Cycle Time Behind A Burst Access Mobley
App. 09/828,283 (RAM 465)	U.S.	04/05/2001	EMS	Method For Hiding A Refresh In A Pseudo-Static Memory Mobley
Pat. 6,538,928 (RAM 468)	U.S.	10/11/2000	EMS	Method For Reducing The Width Of A Global Data Bus In A Memory Architecture Mobley
App. 09/828,488 (RAM 487)	U.S.	04/05/2001	EMS	Method And Circuit For Increasing The Memory Access Speed Of An Enhanced Synchronous SDRAM Peters
App. 10/782,386 (RAM 487 CON)	U.S.	02/18/2004	EMS	Method And Circuit For Increasing The Memory Access Speed Of An Enhanced Synchronous SDRAM Peters
App. 10/178,072 (RAM 491)	U.S.	06/20/2002	RAM	Method And Circuit For Increasing The Memory Access Speed Of An Enhanced Synchronous SDRAM Mobley, Peters, Schuette

Pat. 5,787,457	U.S.	10/18/1996	EMS	Cached Synchronous DRAM Architecture Allowing Concurrent DRAM Operations Miller, Rogers, Tomashot, Bondurant, Jones, Jr., Mobley
Pat. 6,289,413	U.S.	10/15/1999	EMS	Cached Synchronous DRAM Architecture Having A Mode Register Programmable Cache Policy Rogers, Tomashot, Bondurant, Jones, Jr., Mobley

Subject to the exceptions described on Exhibit C to the Patent Purchase Agreement by and between the parties dated as of April 13, 2004, Assignor represents, warrants and covenants that: (i) it is the sole owner, assignee and holder of record title to the Patent Rights identified above, (ii) it has obtained and submitted for recordation previously executed assignments for all patent applications and patents identified above as necessary to fully perfect its rights and title therein in accordance with governing law and regulations in each respective jurisdiction, and (iii) it has full power and authority to make the present assignment.

Assignor further agrees to and hereby does sell, assign, transfer and convey unto Assignee all of its rights: (i) in and to causes of action and enforcement rights for the Patent Rights including all rights to pursue damages, injunctive relief and other remedies for past and future infringement of the Patent Rights, and (ii) to apply in any or all countries of the world for patents, certificates of invention or other governmental grants for the Patent Rights, including without limitation under the Paris Convention for the Protection of Industrial Property, the International Patent Cooperation Treaty, or any other convention, treaty, agreement or understanding. Assignor also hereby authorizes the respective patent office or governmental agency in each jurisdiction to issue any and all patents or certificates of invention which may be granted upon any of the Patent Rights in the name of Assignee, as the assignee to the entire interest therein.

Assignor will, at the reasonable request of Assignee and at Assignee's sole expense do all things necessary, proper, or advisable, including without limitation the execution, acknowledgment and recordation of specific assignments, oaths, declarations and other documents on a country-by-country basis, to assist Assignee in obtaining, perfecting, sustaining, and/or enforcing the Patent Rights. Such assistance shall include providing, and obtaining from the respective inventors, prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, powers of attorney, specifications, declarations or other papers and other assistance reasonably necessary for filing patent applications, complying with any duty of disclosure, and conducting prosecution, reexamination, reissue, interference or other priority proceedings, opposition proceedings, cancellation proceedings, public use proceedings, infringement or other court actions and the like with respect to the Patent Rights.

The terms and conditions of this Assignment shall inure to the benefit of Assignee, its successors, assigns and other legal representatives, and shall be binding upon Assignor, its successor, assigns and other legal representatives.

