

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>RICHARD PEREGO</td> <td>12/17/2010</td> </tr> <tr> <td>THOMAS VOGELSANG</td> <td>12/20/2010</td> </tr> <tr> <td>JOHN BROOKS</td> <td>12/20/2010</td> </tr> </tbody> </table>		Name	Execution Date	RICHARD PEREGO	12/17/2010	THOMAS VOGELSANG	12/20/2010	JOHN BROOKS	12/20/2010		
Name	Execution Date										
RICHARD PEREGO	12/17/2010										
THOMAS VOGELSANG	12/20/2010										
JOHN BROOKS	12/20/2010										
RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>RAMBUS INC.</td> </tr> <tr> <td>Street Address:</td> <td>1050 ENTERPRISE WAY, SUITE 700</td> </tr> <tr> <td>City:</td> <td>SUNNYVALE</td> </tr> <tr> <td>State/Country:</td> <td>CALIFORNIA</td> </tr> <tr> <td>Postal Code:</td> <td>94089</td> </tr> </table>		Name:	RAMBUS INC.	Street Address:	1050 ENTERPRISE WAY, SUITE 700	City:	SUNNYVALE	State/Country:	CALIFORNIA	Postal Code:	94089
Name:	RAMBUS INC.										
Street Address:	1050 ENTERPRISE WAY, SUITE 700										
City:	SUNNYVALE										
State/Country:	CALIFORNIA										
Postal Code:	94089										
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>13990363</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13990363						
Property Type	Number										
Application Number:	13990363										
CORRESPONDENCE DATA											
Fax Number: (650)938-5200 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> Phone: 650-335-7164 Email: jsong@fenwick.com Correspondent Name: JAE WON SONG Address Line 1: 801 CALIFORNIA STREET Address Line 2: FENWICK & WEST LLP Address Line 4: MOUNTAIN VIEW, CALIFORNIA 94041											
ATTORNEY DOCKET NUMBER:	28178-19852 (RA845)										
NAME OF SUBMITTER:	JAE WON SONG, REG. NO. 59,070										
Signature:	/Jae Won Song/										

Date:

10/03/2013

Total Attachments: 8

source=19852_17023_US_Assignment#page1.tif

source=19852_17023_US_Assignment#page2.tif

source=19852_17023_US_Assignment#page3.tif

source=19852_17023_US_Assignment#page4.tif

source=19852_17023_US_Assignment#page5.tif

source=19852_17023_US_Assignment#page6.tif

source=19852_17023_US_Assignment#page7.tif

source=19852_17023_US_Assignment#page8.tif

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, the person(s) named below (referred to as "INVENTOR" whether singular or plural) has sold, assigned, and transferred and does hereby sell, assign, and transfer to **Rambus Inc.**, a Delaware corporation, having a place of business at 1050 Enterprise Way, Suite 700, Sunnyvale, CA 94089 ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the following:

1. The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the provisional application filed under 35 U.S.C. §111(b) or non-provisional application filed under 35 U.S.C. §111(a) and entitled "**MEMORY REFRESH METHOD AND DEVICES**" ("APPLICATION"), which:

☒ was filed on **December 3, 2010**,
now bearing U.S. application number **61/419,672**.

2. The entire worldwide right, title, and interest in and to:
(a) the APPLICATION; (b) all applications claiming priority from the APPLICATION;
(c) all utility, divisional, continuation, substitute, renewal, reissue, and other applications related thereto which have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) which may be granted on the applications set forth in (a), (b), and (c); and (e) all right of priority in the APPLICATION, together with all rights to recover damages for infringement of provisional rights.

INVENTOR agrees that ASSIGNEE may apply for and receive patents for SUBJECT MATTER in ASSIGNEE's own name.

INVENTOR agrees to do the following, when requested, and without further consideration, in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. INVENTOR further agrees to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

INVENTOR represents that INVENTOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the INVENTOR has not made and will not hereafter make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

INVENTOR grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Title of Document: ASSIGNMENT

Re:

Title:

MEMORY REFRESH METHOD AND DEVICES

Filed: (if applicable)

December 3, 2010

Application No.: (if applicable)

61/419,672

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

Name and Signature

Richard E Perego
Richard Perego

Date of

Signature

12/17/2010

State of California

County of _____

)

)

On _____ before me, _____, Notary Public,
personally appeared Richard Perego, who proved to me on the basis of satisfactory evidence to
be the person whose name is subscribed to the within instrument and acknowledged to me that
he executed the same in his authorized capacity, and that by his signature on the instrument the
person, or the entity upon behalf of which the person acted, executed the instrument.
I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: _____ (Seal)

Title of Document: ASSIGNMENT

Re:

Title: MEMORY REFRESH METHOD AND DEVICES

Filed: (if applicable) December 3, 2010

Application No.: (if applicable) 61/419,672

<u>Name and Signature</u>	<u>Date of Signature</u>
---------------------------	--------------------------

Thomas Vogelsang	
------------------	--

State of California)
County of _____)

On _____ before me, _____, Notary Public,
personally appeared Thomas Vogelsang, who proved to me on the basis of satisfactory evidence
to be the person whose name is subscribed to the within instrument and acknowledged to me that
he executed the same in his authorized capacity, and that by his signature on the instrument the
person, or the entity upon behalf of which the person acted, executed the instrument.
I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: _____ (Seal)

Title of Document: ASSIGNMENT

Re:

Title:

MEMORY REFRESH METHOD AND DEVICES

Filed: (if applicable)

December 3, 2010

Application No.: (if applicable)

61/419,672

Name and Signature

Date of
Signature

John Brooks

State of California

County of _____

)

)

On _____ before me, _____, Notary Public,
personally appeared John Brooks, who proved to me on the basis of satisfactory evidence to be
the person whose name is subscribed to the within instrument and acknowledged to me that he
executed the same in his authorized capacity, and that by his signature on the instrument the
person, or the entity upon behalf of which the person acted, executed the instrument.
I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: _____ (Seal)

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, the person(s) named below (referred to as "INVENTOR" whether singular or plural) has sold, assigned, and transferred and does hereby sell, assign, and transfer to Rambus Inc., a Delaware corporation, having a place of business at 1050 Enterprise Way, Suite 700, Sunnyvale, CA 94089 ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the following:

1. The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the provisional application filed under 35 U.S.C. §111(b) or non-provisional application filed under 35 U.S.C. §111(a) and entitled "MEMORY REFRESH METHOD AND DEVICES" ("APPLICATION"), which:

☒ was filed on December 3, 2010,
now bearing U.S. application number 61/419,672.

2. The entire worldwide right, title, and interest in and to:
(a) the APPLICATION; (b) all applications claiming priority from the APPLICATION;
(c) all utility, divisional, continuation, substitute, renewal, reissue, and other applications related thereto which have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) which may be granted on the applications set forth in (a), (b), and (c); and (e) all right of priority in the APPLICATION, together with all rights to recover damages for infringement of provisional rights.

INVENTOR agrees that ASSIGNEE may apply for and receive patents for SUBJECT MATTER in ASSIGNEE's own name.

INVENTOR agrees to do the following, when requested, and without further consideration, in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. INVENTOR further agrees to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

INVENTOR represents that INVENTOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the INVENTOR has not made and will not hereafter make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

INVENTOR grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Title of Document: ASSIGNMENT.

Re:

Title:

MEMORY REFRESH METHOD AND DEVICES

Filed: (if applicable)

December 3, 2010

Application No.: (if applicable)

61/419,672

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

Name and Signature

Date of
Signature

Richard Perego

State of California

County of _____

)
)

On _____ before me, _____, Notary Public,
personally appeared Richard Perego, who proved to me on the basis of satisfactory evidence to
be the person whose name is subscribed to the within instrument and acknowledged to me that
he executed the same in his authorized capacity, and that by his signature on the instrument the
person, or the entity upon behalf of which the person acted, executed the instrument.
I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: _____ (Seal)

Title of Document: ASSIGNMENT

Re:

Title:

MEMORY REFRESH METHOD AND DEVICES

Filed: (if applicable)

December 3, 2010

Application No.: (if applicable)

61/419,672

Name and Signature

Date of
Signature

Thomas Vogelsang

12/20/10

Thomas Vogelsang

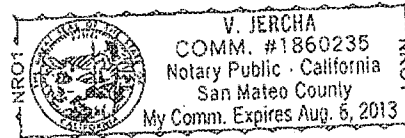
State of California)

County of San Jose)

On Dec. 20, 2010 before me, V. Jercha, Notary Public, personally appeared Thomas Vogelsang, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature: V. Jercha

(Seal)

Title of Document: ASSIGNMENT

Re:

Title:

MEMORY REFRESH METHOD AND DEVICES

Filed: (if applicable)

December 3, 2010

Application No.: (if applicable)

61/419,672

Name and Signature

Date of
Signature

John Brooks

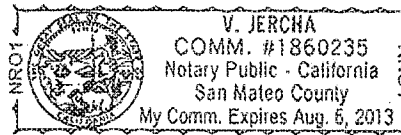
12/20/10

State of California

County of Santa Clara

On Dec 20, 2010 before me, V. Jercha, Notary Public,
personally appeared John Brooks, who proved to me on the basis of satisfactory evidence to be
the person whose name is subscribed to the within instrument and acknowledged to me that he
executed the same in his authorized capacity, and that by his signature on the instrument the
person, or the entity upon behalf of which the person acted, executed the instrument.
I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature:

V. Jercha

(Seal)