

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>Thomas Vogelsang</td> <td>10/25/2012</td> </tr> <tr> <td>Suresh N. Rajan</td> <td>10/25/2012</td> </tr> <tr> <td>Ian P. Shaeffer</td> <td>10/29/2012</td> </tr> <tr> <td>Frederick A. Ware</td> <td>10/25/2012</td> </tr> <tr> <td>Wayne F. Ellis</td> <td>10/25/2012</td> </tr> </tbody> </table>		Name	Execution Date	Thomas Vogelsang	10/25/2012	Suresh N. Rajan	10/25/2012	Ian P. Shaeffer	10/29/2012	Frederick A. Ware	10/25/2012	Wayne F. Ellis	10/25/2012
Name	Execution Date												
Thomas Vogelsang	10/25/2012												
Suresh N. Rajan	10/25/2012												
Ian P. Shaeffer	10/29/2012												
Frederick A. Ware	10/25/2012												
Wayne F. Ellis	10/25/2012												
RECEIVING PARTY DATA													
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>13846200</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13846200								
Property Type	Number												
Application Number:	13846200												
CORRESPONDENCE DATA													
Fax Number:	9783410136												
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>													
Phone:	978-341-0036												
Email:	cheryl.thomas@hbsr.com												
Correspondent Name:	James M. Smth												
Address Line 1:	Hamilton, Brook, Smith & Reynolds, P.C.												
Address Line 2:	530 Virginia Road, P.O. Box 9133												
Address Line 4:	Concord, MASSACHUSETTS 01742-9133												
ATTORNEY DOCKET NUMBER:	3684.1006-002												
NAME OF SUBMITTER:	Cheryl Thomas												

CH \$40.00 13846200

Signature:	/Cheryl Thomas/
Date:	09/04/2013
Total Attachments: 4 source=3684.1006-002 Assignment#page1.tif source=3684.1006-002 Assignment#page2.tif source=3684.1006-002 Assignment#page3.tif source=3684.1006-002 Assignment#page4.tif	

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and pursuant to my obligation to Rambus Inc. and/or its affiliates to assign intellectual property, and pursuant to any other applicable agreements regarding the assignment of intellectual property among Rambus Inc. and its affiliates, I, as one of the person(s) named below

Thomas Vogelsang of Mountain View, CA
Suresh N. Rajan of Fremont, CA
Ian P. Shaeffer of Los Gatos, CA
Frederick A. Ware of Los Altos Hills, CA
Wayne F. Ellis of Saratoga, CA

have sold, assigned, and transferred and/or I do 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. My entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the patent application ("APPLICATION") titled "**Error Correction in a Memory Device**", having:

 X United States Patent Application No. **61/714,995**, filed on **October 17, 2012**;

 which claims priority to U.S. Patent Application No. [Enter **APPLICATION NUMBER**] filed on [Enter **DATE**]; or

 Application number (_____), filed (_____), inserted by (_____) on (_____), initials (_____) [Where I hereby authorize and request ASSIGNEE or its agents to insert here in each parentheses the application number and filing date when known, along with the printed name, date, and signed initials of the person completing this section].

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

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

As part of this Assignment, I further agree to do the following, when requested, and without further consideration: (1) execute all oaths, declarations, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests 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 conveyed. I further agree to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.



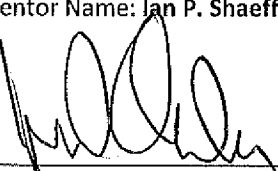
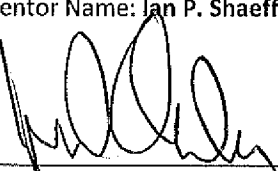
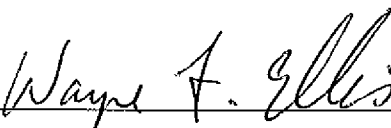
I represent that I had or still have the right, title, and interest to convey as set forth herein, and covenant with ASSIGNEE that I have not made and will not make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests conveyed.

I grant ASSIGNEE or its agents 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.

The terms and covenants of this Assignment shall inure to the benefit of ASSIGNEE, its successors, assigns, and legal representatives, and shall be binding upon me, and my heirs, legal representatives and assigns.

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.

Each Inventor: Please Sign and Date Below:

	<u>10/25/12</u>
Inventor Name: Thomas Vogelsang	Date
	<u>10/25/12</u>
Inventor Name: Suresh N. Rajan	Date
	<u>10/25/12</u>
Inventor Name: Ian P. Shaeffer	Date
	<u>10/25/12</u>
Inventor Name: Frederick A. Ware	Date
	<u>10/25/12</u>
Inventor Name: Wayne F. Ellis	Date

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and pursuant to my obligation to Rambus Inc. and/or its affiliates to assign intellectual property, and pursuant to any other applicable agreements regarding the assignment of intellectual property among Rambus Inc. and its affiliates, I, as one of the person(s) named below

Thomas Vogelsang of Mountain View, CA
Suresh N. Rajan of Fremont, CA
Ian P. Shaeffer of Los Gatos, CA
Frederick A. Ware of Los Altos Hills, CA
Wayne F. Ellis of Saratoga, CA

have sold, assigned, and transferred and/or I do 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. My entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the patent application ("APPLICATION") titled "**Error Correction in a Memory Device**", having:

 X United States Patent Application No. **61/714,995**, filed on **October 17, 2012**;

 which claims priority to U.S. Patent Application No. **[Enter APPLICATION NUMBER]** filed on **[Enter DATE]**; or

 Application number (_____), filed (_____), inserted by (_____) on (_____), initials (_____)
[Where I hereby authorize and request ASSIGNEE or its agents to insert here in each parentheses the application number and filing date when known, along with the printed name, date, and signed initials of the person completing this section].

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

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

As part of this Assignment, I further agree to do the following, when requested, and without further consideration: (1) execute all oaths, declarations, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests 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 conveyed. I further agree to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

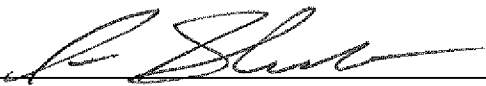
I represent that I had or still have the right, title, and interest to convey as set forth herein, and covenant with ASSIGNEE that I have not made and will not make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests conveyed.

I grant ASSIGNEE or its agents 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.

The terms and covenants of this Assignment shall inure to the benefit of ASSIGNEE, its successors, assigns, and legal representatives, and shall be binding upon me, and my heirs, legal representatives and assigns.

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.

Each Inventor: Please Sign and Date Below:

Inventor Name: Thomas Vogelsang	Date
Inventor Name: Suresh N. Rajan	Date
 Inventor Name: Ian P. Shaeffer	10/29/12 Date
Inventor Name: Frederick A. Ware	Date
Inventor Name: Wayne F. Ellis	Date