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| <b>PATENT ASSIGNMENT COVER SHEET</b> |
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4766808

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| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT              |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                  |
| <b>CONVEYING PARTY DATA</b>   |                             |
| <b>Name</b>   | <b>Execution Date</b>       |
| FREDERICK A. WARE   | 10/13/2015                  |
| JOHN ERIC LINSTADT  | 10/12/2015                  |
| KENNETH L. WRIGHT   | 10/13/2015                  |
| <b>RECEIVING PARTY DATA</b>   |                             |
| <b>Name:</b>  | RAMBUS INC                  |
| <b>Street Address:</b>  | 1050 ENTERPRISE WAY #700    |
| <b>City:</b>  | SUNNYVALE                   |
| <b>State/Country:</b>   | CALIFORNIA                  |
| <b>Postal Code:</b>   | 94089                       |
| <b>PROPERTY NUMBERS Total: 1</b>  |                             |
| <b>Property Type</b>  | <b>Number</b>               |
| <b>Application Number:</b>  | 15610001                    |
| <b>CORRESPONDENCE DATA</b>  |                             |
| <b>Fax Number:</b>  |                             |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> |                             |
| <b>Phone:</b>   | 408-462-8000                |
| <b>Email:</b>   | tfriedman@rambus.com        |
| <b>Correspondent Name:</b>  | TAMMY FRIEDMAN              |
| <b>Address Line 1:</b>  | 1050 ENTERPRISE WAY #700    |
| <b>Address Line 4:</b>  | SUNNYVALE, CALIFORNIA 94089 |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 10456US03                   |
| <b>NAME OF SUBMITTER:</b>   | TAMMY FRIEDMAN              |
| <b>SIGNATURE:</b>   | /TAMMY FRIEDMAN/            |
| <b>DATE SIGNED:</b>   | 01/09/2018                  |
| <b>Total Attachments: 2</b>   |                             |
| source=10456US01_Assignment#page1.tif   |                             |
| source=10456US01_Assignment#page2.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

Frederick A. Ware of Los Altos Hills, CA  
John Eric Linstadt of Palo Alto, CA  
Kenneth L. Wright of Sunnyvale, 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 "VARIABLE WIDTH MEMORY MODULE SUPPORTING ENHANCED ERROR DETECTION AND CORRECTION", having:

United States Patent Application No. 62/239,158, filed on October 8, 2015;

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.

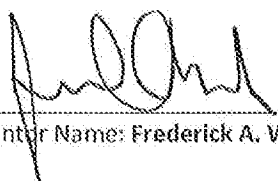
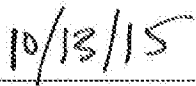

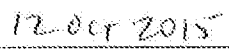

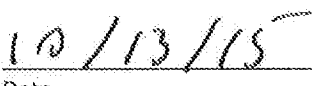
I represent that I had or still have the right, title, and interest to convey as set forth herein, and covenant with ASSIGNEE that I have not made and will not make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests conveyed.

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: Frederick A. Ware  | Date   |
|  |  |
| Inventor Name: John Eric Linstadt   | Date   |
|  |  |
| Inventor Name: Kenneth L. Wright  | Date   |