

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5824260

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CRAIG E. HAMPEL	06/01/2006
FREDERICK A. WARE	06/01/2006
<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>	16223031
<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>	RA473.C4C1C1.US
<b>NAME OF SUBMITTER:</b>	TAMMY FRIEDMAN
<b>SIGNATURE:</b>	/TAMMY FRIEDMAN/
<b>DATE SIGNED:</b>	11/16/2019
<b>Total Attachments: 7</b>	
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**DECLARATION FOR UTILITY OR  
DESIGN  
PATENT APPLICATION  
(37 CFR 1.63)**☐Declaration  
Submitted  
With Initial  
Filing

OR

☒Declaration  
Submitted after Initial  
Filing (surcharge  
(37 CFR 1.16 (e))  
required)Attorney Docket  
Number

RBS2.P059

First Named Inventor

Craig E. HAMPEL

COMPLETE IF KNOWN

Application Number

11/381,349

Filing Date

May 2, 2006

Art Unit

Unknown

Examiner Name

Not Yet Assigned

**I hereby declare that:**

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

MEMORY MODULE WITH REDUCED ACCESS GRANULARITY

(Title of the Invention)

the specification of which

☐

is attached hereto

OR

☒

was filed on (MM/DD/YYYY)

May 2, 2006

as United States Application Number or PCT International

Application Number

11/381,349

and was amended on (MM/DD/YYYY)

(If applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

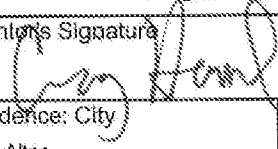
[Page 1 of 3]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance completing the form, call 1-800-PTO-9199 and select option 2.

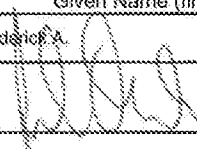
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**DECLARATION — Utility or Design Patent Application**

Direct all correspondence to:	<input checked="" type="checkbox"/> The address associated with Customer Number:	30554	OR	<input type="checkbox"/> Correspondence address below
Name Shemwell Mahamedi LLP				
Address 4880 Stevens Creek Boulevard, Suite 201				
City San Jose	State California	ZIP 95129		
Country US	Telephone 408-236-6640	Email cshemwell@smtawip.com		
<p align="center"><b>WARNING:</b></p> <p>Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.</p> <p>I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.</p>				
<b>NAME OF SOLE OR FIRST INVENTOR:</b>		<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any)) Craig E.		Family Name or Surname Hampel		
Inventor's Signature 			Date 06/01/06	
Residence: City Los Altos	State California	Country USA	Citizenship USA	
Mailing Address 340 Bellevue Court				
City Los Altos	State California	Zip 94024	Country USA	
<input checked="" type="checkbox"/> Additional inventors or a legal representative are being named on the 1 supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.				

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**DECLARATION****ADDITIONAL INVENTOR(S)**  
Supplemental SheetPage 3 of 3

<b>Name of Additional Joint Inventor, if any:</b>		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Frederick A. 		Ware	
Inventor's Signature		Date <u>6/1/06</u>	
Los Altos Hills Residence: City	California State	USA Country	USA Citizenship
13961 Fremont Pines Lane Mailing Address			
Los Altos Hills City	California State	94022 Zip	USA Country
<b>Name of Additional Joint Inventor, if any:</b>		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country
<b>Name of Additional Joint Inventor, if any:</b>		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

ASSIGNMENT

In consideration of good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I/We, Craig E. Hampel and Frederick A. Ware, the undersigned Assignor(s), believing to be the original, first and sole or joint inventor(s) of any and all new and useful improvements disclosed in the application for the United States patent entitled

MEMORY MODULE WITH REDUCED ACCESS GRANULARITY

hereby sell, assign, and transfer to Rambus Inc., a Delaware Corporation having a principal place of business at 4440 El Camino Real, Los Altos, California 94022, ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements that are disclosed in the same patent application

  X   which was filed with the United States Patent and Trademark Office on May 2, 2006, and which was assigned Application Number 11/381,349.

           which has been executed by the undersigned prior hereto or concurrently herewith on the dates indicated below.

The undersigned further sell, assign, and transfer to Assignee said application and all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications, utility models and the like that have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all rights of priority resulting from the filing of said United States application; and the right to file foreign applications directly in the name of the Assignee and to claim for any such foreign applications any priority rights to which such applications are entitled under international conventions, treaties or otherwise.

The undersigned further agree that said Assignee may apply for and receive a patent or patents for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions and all other patent applications on any and all said improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said improvements

and for vesting title to said improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives.

The undersigned covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

The undersigned hereby authorize and request the Officials of the United States Patent and Trademark Office and any and all foreign Patent Offices to issue any and all Letters Patents, when granted, to said Assignee as the assignee of the entire right, title and interest in and to the same, for the sole use of said Assignee, its successors and assigns, to the full end of the term for which said Letters Patents may be granted.

The undersigned hereby grant to Charles E. Shemwell (Reg. No. 40,171), located at 4880 Stevens Creek Blvd., Suite 201, San Jose, California 95129-1034, the power to insert on this document any further identification necessary or desirable to comply with the rules of the United States Patent and Trademark Office for recordation of this Assignment.

**Each Inventor/Assignor: Please Sign and Date Below:**

June 1, 2006  
Date

Craig E. Hampel  
Name: Craig E. Hampel

State of California       )  
                                      ) ss  
County of Santa Clara    )

I certify that I know/~~have satisfactory evidence that~~ Craig E. Hampel is the person who appeared before me, and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

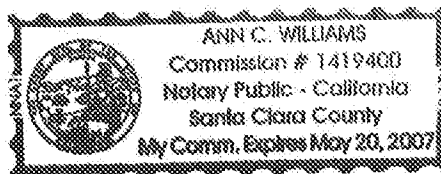
WITNESS my hand and official seal.

Ann C. Williams  
Notary Public Signature

Date: 6/1/06

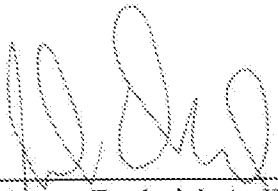
Please also list date you signed the accompanying DECLARATION AND POWER OF ATTORNEY if Assignment executed with new filing:

June 1, 2006  
Date





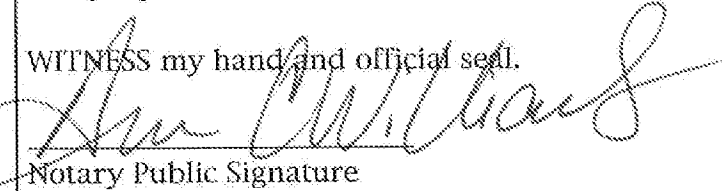
6/1, 2006  
 Date

  
 Name: Frederick A. Ware

State of California     )  
                                       ) ss  
 County of Santa Clara     )

I certify that I know/~~have satisfactory evidence~~ that Frederick A. Ware is the person who appeared before me, and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

WITNESS my hand and official seal.

  
 Notary Public Signature

Date: 6/1/06

Please also list date you signed the accompanying DECLARATION AND POWER OF ATTORNEY if Assignment executed with new filing:

6/1, 2006  
 Date

