505587430 07/24/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5634229

| | | NEW ASSIGNMENT | |
|---|-----------------------|---|----------------|
| NATURE OF CONVEYAN | ICE: | ASSIGNMENT | |
| CONVEYING PARTY DA | ٩TA | | |
| | | Name | Execution Date |
| WAYNE F. ELLIS | | | 03/04/2011 |
| WAYNE S. RICHARDSC |)N | | 03/04/2011 |
| AKASH BANSAL | | | 03/04/2011 |
| FREDERICK A. WARE | | | 03/04/2011 |
| LAWRENCE LAI | | | 03/04/2011 |
| KISHORE VEN KASAMS | Setty | | 03/08/2011 |
| RECEIVING PARTY DA | TA | | |
| Name: | RAMBUS INC | | |
| Street Address: | 1050 E | NTERPRISE WAY #700 | |
| City: | SUNN | /VALE | |
| State/Country: | CALIFO | DRNIA | |
| Postal Code: | 94089 | | |
| PROPERTY NUMBERS Total: 1 Property Type | | Numehov | |
| Property Type | | Number | |
| Property Type Application Number: | | 16139636 | |
| Application Number: CORRESPONDENCE D Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: | e sent to provideo | 16139636 b the e-mail address first; if that is unsub- d; if that is unsuccessful, it will be sent 408-462-8000 tfriedman@rambus.com TAMMY FRIEDMAN 1050 ENTERPRISE WAY #700 | |
| Application Number: CORRESPONDENCE D Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: Address Line 4: | e sent to provideo | 16139636 b the e-mail address first; if that is unsu d; if that is unsuccessful, it will be sent 408-462-8000 tfriedman@rambus.com TAMMY FRIEDMAN 1050 ENTERPRISE WAY #700 SUNNYVALE, CALIFORNIA 94089 | |
| Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NU | e sent to provideo | 16139636 b the e-mail address first; if that is unsub- d; if that is unsuccessful, it will be sent 408-462-8000 tfriedman@rambus.com TAMMY FRIEDMAN 1050 ENTERPRISE WAY #700 SUNNYVALE, CALIFORNIA 94089 RA893.PCT.C1C1C1C1.US | |
| Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUMBER NAME OF SUBMITTER: | e sent to provideo | 16139636 b the e-mail address first; if that is unsuccessful, it will be sent d; if that is unsuccessful, it will be sent 408-462-8000 tfriedman@rambus.com TAMMY FRIEDMAN 1050 ENTERPRISE WAY #700 SUNNYVALE, CALIFORNIA 94089 RA893.PCT.C1C1C1C1.US TAMMY FRIEDMAN | |
| Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NU | e sent to provideo | 16139636 b the e-mail address first; if that is unsub- d; if that is unsuccessful, it will be sent 408-462-8000 tfriedman@rambus.com TAMMY FRIEDMAN 1050 ENTERPRISE WAY #700 SUNNYVALE, CALIFORNIA 94089 RA893.PCT.C1C1C1C1.US | |

| source=RA893.Prov1.US Assignment (1) (1)#page1.tif | |
|--|--|
| source=RA893.Prov1.US Assignment (1) (1)#page2.tif | |
| source=RA893.Prov1.US Assignment (1) (1)#page3.tif | |
| source=RA893.Prov1.US Assignment (1) (1)#page4.tif | |
| source=RA893.Prov1.US Assignment (1) (1)#page5.tif | |

CORPORATE ASSIGNMENT

WHEREAS, the undersigned,

Wayne F. Ellis Wayne S. Richardson Akash Bansal Frederick A. Ware Lawrence Lai Kishore Ven Kasamsetty 15410 Pepper Lane - Rear, Saratoga, CA 95070
11890 Walbrook Drive, Saratoga, CA 95070
887 Blossom Drive, Santa Clara, CA 95050
13961 Fremont Pines, Los Altos Hills, CA 94022
1133 Valley Quail Circle, San Jose, CA 95120
10657 Larry Way, Cupertino, CA 95014

hereinafter termed "Inventor(s)", have invented certain new and useful improvements in

PROTOCOL FOR MEMORY POWER-MODE CONTROL

and have executed a declaration or oath for an application for a United States patent disclosing and identifying the invention:

____ On the _____ day of _____, 20___;

Or

X Said application having Application Number 61/445,947 and filed on 23 February 2011; and

WHEREAS, <u>RAMBUS INC</u>, a corporation of the State of <u>Delaware</u>, having a place of business at 1050 Enterprise Way, Suite 700, Sunnyvale, CA 94089, (hereinafter termed "Assignee"), is desirous of acquiring the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered jointly or severally by said Inventor(s) (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Inventor(s) to have been received in full from said Assignce:

1. Said Inventor(s) do hereby sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a divisional, substitution, continuation, or continuation-in-part of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.

2. Said Inventor(s) hereby jointly and severally covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States and foreign countries. Such cooperation by said Inventor(s) shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications

PATENT REEL: 049847 FRAME: 0933

for reissuance of any said patents; (c) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation reissues and reexaminations, opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventor(s) in providing such cooperation shall be paid for by said Assignee.

 The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventor(s), their respective heirs, legal representatives and assigns.

4. Said Inventor(s) hereby jointly and severally warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, said Inventors have executed and delivered this instrument to said Assignee as of the dates written below.

J. Ellis

Date

V. JERCHA COMM, #1860235 NROT Notary Public - California San Mateo County Comm. Expires Aug. 6, 2013 P

County of

State of

On $\frac{3}{4}$ ($\frac{3}{4}$) $\frac{3}{4}$, before me, ______ personally appeared <u>Wayne F. Ellis</u>,

California

Santa Clara

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s)(s) are subscribed to the within instrument and acknowledged to me that (he) she/they executed the same in his)her/their authorized capacity(jes), and that by (his)her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 of Notary Public)

PATENT REEL: 049847 FRAME: 0934

ne An

Wayne S. Richardson

Date



State of California) County of Santa Clara) On <u>3/4/2011</u>, before me, <u>UCLa</u>

personally appeared Wayne S. Richardson,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) satisfactory evidence to be the person(s) whose name(s) satisfactory evidence to be the same in and acknowledged to me that he she they executed the same in (higher/their authorized capacity(iss), and that by (higher/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 of Notary Public)

State of

County of

California

Santa Clara

On <u>\$/4/30</u>//, before me, <u>before me</u>, <u>before me}, before me}, befor</u>

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s)(s) are subscribed to the within instrument and acknowledged to me that he'she/they executed the same in his/her/their authorized capacity(iss), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify ander 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 of Notary Public)

PATENT REEL: 049847 FRAME: 0935

Akash Bansal





Frederick A. Ware

Date



| State of | Californía |) | |
|-----------|-----------------------------------|------|--|
| County of | Sauta Clara |) | |
| 0n3/4/11 | , before me, $\frac{1}{\sqrt{2}}$ | ucha | |

personally appeared Frederick A. Ware,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in (his/her/their authorized capacity(ies), and that by(his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 of Notary Public)

State of California

County of

Lawrence Lai

111

Date



On 3/4/2011, before me, ______ personally appeared Lawrence Lai.

Santa Clara

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is are subscribed to the within instrument and acknowledged to me that (he) she/they executed the same in (his/her/their authorized capacity(ies), and that by/his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 of Notary Public)

PATENT REEL: 049847 FRAME: 0936

Kishore Ven Kasamsetty

σX 100 Date

V. JERCHA COMM. #1860235

Notary Public - California San Mateo County Comm. Expires Aug. 6, 2013

NRO1

State of California County of Santa Clara 003/1 2011, before me, personally appeared Kishore Ven Kalamsetty,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is are subscribed to the within instrument and acknowledged to me that helshe/they executed the same in (his)her/their authorized capacity(ies); and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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 of Notary Public)

RECORDED: 07/24/2019