505131197 10/08/2018 PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVEY	ANCE:	ASSIGNMENT		
CONVEYING PARTY	DATA			
		Name	Execution Date	
MASUM HOSSAIN			10/15/2015	
NHAT NGUYEN			10/07/2015	
YIKUI JEN DONG			10/07/2015	
ARASH ZARGARAN-YAZD			10/07/2015	
	DATA			
Name:	RAMBL	RAMBUS INC		
Street Address:	1050 E	1050 ENTERPRISE WAY #700		
City:	SUNNY	SUNNYVALE		
State/Country:	CALIFC	CALIFORNIA		
Postal Code:	94089	94089		
Application Number:		15799016		
	l be sent to if provideo	<i>the e-mail address first; if that is ur</i> <i>I; if that is unsuccessful, it will be se</i> 408-462-8000		
Email:		tfriedman@rambus.com		
Correspondent Nam	e:	TAMMY FRIEDMAN		
	e:	TAMMY FRIEDMAN 1050 ENTERPRISE WAY #700 SUNNYVALE, CALIFORNIA 94089		
Correspondent Nam Address Line 1:	e:	1050 ENTERPRISE WAY #700		
Correspondent Nam Address Line 1: Address Line 4: ATTORNEY DOCKET	e: NUMBER:	1050 ENTERPRISE WAY #700 SUNNYVALE, CALIFORNIA 94089		
Correspondent Nam Address Line 1: Address Line 4:	e: NUMBER:	1050 ENTERPRISE WAY #700 SUNNYVALE, CALIFORNIA 94089 10373US04		
Correspondent Nam Address Line 1: Address Line 4: ATTORNEY DOCKET NAME OF SUBMITTE	e: NUMBER:	1050 ENTERPRISE WAY #700 SUNNYVALE, CALIFORNIA 94089 10373US04 TAMMY FRIEDMAN		
Correspondent Nam Address Line 1: Address Line 4: ATTORNEY DOCKET NAME OF SUBMITTE SIGNATURE: DATE SIGNED: Total Attachments: 4	e: NUMBER: R:	1050 ENTERPRISE WAY #700 SUNNYVALE, CALIFORNIA 94089 10373US04 TAMMY FRIEDMAN /TAMMY FRIEDMAN/ 10/08/2018		
Correspondent Nam Address Line 1: Address Line 4: ATTORNEY DOCKET NAME OF SUBMITTE SIGNATURE: DATE SIGNED:	e: NUMBER: R: ment#page1	1050 ENTERPRISE WAY #700 SUNNYVALE, CALIFORNIA 94089 10373US04 TAMMY FRIEDMAN /TAMMY FRIEDMAN/ 10/08/2018		

505131197

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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

Masum Hossain of Edmonton, Alberta, CANADA Nhat Nguyen of San Jose, CA Yikui Jen Dong of Cupertino, CA Arash Zargaran-Yazd 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 "COLLABORATIVE CLOCK AND DATA RECOVERY", having:
 - X United States Patent Application No. 62/235,140, filed on September 30, 2015;
- which claims priority to U.S. Patent Application No. [Enter APPLICATION NUMBER] filed on [Enter DATE] ; or
- Application number (______), filed (______), initials (_____), initials (_____) 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

App. No.: 62/235,140

PATENT REEL: 047095 FRAME: 0903

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.

and anoun Hesserier	Oct 15 th 2015
Inventor Name: Masum Hossain	Date
Inventor Name: Nhat Nguyen	Date
Inventor Name: Yikui Jen Dong	Date
Inventor Name: Arash Zargaran-Yazd	Date

Each Inventor: Please Sign and Date Below:

Docket No.: 765-0103P / 10373US01 Page 2 of 2

App. No.: 62/235,140

PATENT REEL: 047095 FRAME: 0904

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

Masum Hossain of Edmonton, Alberta, CANADA Nhat Nguyen of San Jose, CA Yikui Jen Dong of Cupertino, CA Arash Zargaran-Yazd of Sunnyvale, CA

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App. No.: 62/235,140

PATENT REEL: 047095 FRAME: 0905

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.

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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: Masum Hossain	Date
MAMULA Inventor Name: Nhat Nguyen	- <u>10/η/2015</u> Date
gilly Jen Day	10/7/2015
Inventor Name: Yikul Jen Dong	Date
JA Down	10/07/2015
Inventor Name: Arash Zargaran-Yazd	Date
and an and a second	MALES.

Docket No.: 765-0103P / 10373US01

App. No.: 62/235,140 PATENT REEL: 047095 FRAME: 0906

RECORDED: 10/08/2018