

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

EPAS ID: PAT5482642

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
LIWEN CHU	04/11/2017
LEI WANG	05/21/2017
JINJING JIANG	04/11/2017
HONGYUAN ZHANG	04/12/2017
YAKUN SUN	04/13/2017
HUI-LING LOU	04/11/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MARVELL SEMICONDUCTOR, INC.
<b>Street Address:</b>	5488 MARVELL LANE
<b>City:</b>	SANTA CLARA
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95054
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15486186
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(408)222-2755
<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>	408-222-2500
<b>Email:</b>	sherir@marvell.com
<b>Correspondent Name:</b>	KELVIN VIVIAN
<b>Address Line 1:</b>	5488 MARVELL LANE
<b>Address Line 4:</b>	SANTA CLARA, CALIFORNIA 95054
<b>ATTORNEY DOCKET NUMBER:</b>	MP6613
<b>NAME OF SUBMITTER:</b>	KELVIN VIVIAN
<b>SIGNATURE:</b>	/Kelvin Vivian/
<b>DATE SIGNED:</b>	04/18/2019
<b>Total Attachments: 8</b>	

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ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, each of us, the undersigned,

**Liwen Chu, Lei Wang, Jinjing Jiang, Hongyuan Zhang, Yakun Sun, and Hui-Ling Lou**

who have created a certain invention for which an application for United States Letters Patent was executed by each of us concurrently herewith and entitled:

**UPLINK MULTI-USER TRANSMISSION**

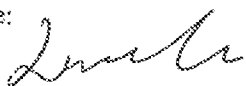
Does hereby sell, assign and transfer to Marvell Semiconductor, Inc., a corporation of California, having a place of business at 5488 Marvell Lane, Santa Clara, CA 95054, its successors, assigns, and legal representatives, the full and exclusive right to said invention and said application and to any and all inventions described in said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties;

Does hereby further sell, assign and transfer to Marvell Semiconductor, Inc., its successors, assigns, and legal representatives, the full and exclusive right to United States Provisional Patent Application Nos. 62/321,703, filed April 12, 2016, entitled "HE Control Field Content," and Application No. 62/332,972, filed May 6, 2016, entitled "HE Control Field Content-Scheduling Information for UL MU Response," and to any and all inventions described in said provisional patent application(s) for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be entitled to the benefit thereof in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties;

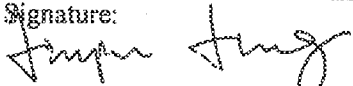
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Covenants with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full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

IN TESTIMONY WHEREOF we have hereunto set our signatures on the date(s) indicated below.

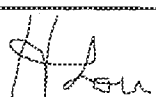
Full Name of First Inventor:	
Liwen Chu	
Inventor's Signature:	Date: Month/Day/Year
	08/11/17

Full Name of Second Inventor: Lei Wang	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Third Inventor: Jinjing Jiang	
Inventor's Signature: 	Date: Month/Day/Year 04/11/17

Full Name of Fourth Inventor: Hongyuan Zhang	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fifth Inventor: Yakun Sun	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Sixth Inventor: Hui-Ling Lou	
Inventor's Signature: 	Date: Month/Day/Year 4/11/2017

Accepted on behalf of:

MARVELL SEMICONDUCTOR, INC.

By: 

Name: KELVIN YVIAN

Title: 29 MAY 2018, DIRECTOR INTELLECTUAL PROPERTY

Date \_\_\_\_\_

ASSIGNMENT

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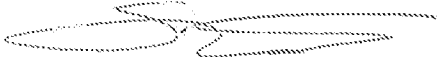
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IN TESTIMONY WHEREOF we have hereunto set our signatures on the date(s) indicated below.

Full Name of First Inventor:	
Liwen Chu	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Second Inventor: Lei Wang	
Inventor's Signature: 	Date: Month/Day/Year 5/21/17

Full Name of Third Inventor: Jinjing Jiang	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fourth Inventor: Hongyuan Zhang	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fifth Inventor: Yakun Sun	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Sixth Inventor: Hui-Ling Lou	
Inventor's Signature:	Date: Month/Day/Year

Accepted on behalf of:

MARVELL SEMICONDUCTOR, INC.

By: 

Name: KELVIN VINIAN

Title: DIRECTOR, INTELLECTUAL PROPERTY

Date: 29 MAY 2018

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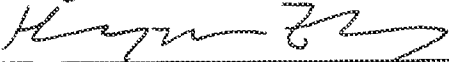
Liwen Chu

Inventor's Signature:

Date: Month/Day/Year

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Inventor's Signature:	Date: Month/Day/Year

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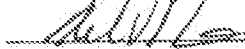
Full Name of Fourth Inventor: Hongyuan Zhang	
Inventor's Signature: 	Date: Month/Day/Year 4/12/2017

Full Name of Fifth Inventor: Yakun Sun	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Sixth Inventor: Hui-Ling Lou	
Inventor's Signature:	Date: Month/Day/Year

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Title: DIRECTOR, INTELLECTUAL PROPERTY

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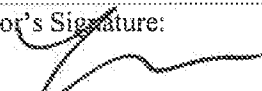
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