505851806 01/07/2020

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

**SUBMISSION TYPE:** CORRECTIVE ASSIGNMENT **NATURE OF CONVEYANCE:** Corrective Assignment to correct the SPELLING OF INVENTOR HONGYUAN ZHANG'S NAME previously recorded on Reel 047445 Frame 0026. Assignor(s) hereby confirms the ASSIGNMENT.

**RESUBMIT DOCUMENT ID:** 505642960

## **CONVEYING PARTY DATA**

Name	Execution Date
XIAYU ZHENG	10/12/2018
HONGYUAN ZHANG	08/08/2019
SUDHIR SRINIVASA	10/12/2018

### RECEIVING PARTY DATA

Name:	MARVELL SEMICONDUCTOR, INC.
Street Address:	5488 MARVELL LANE
City:	SANTA CLARA
State/Country:	CALIFORNIA
Postal Code:	95054

#### PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16163167

#### CORRESPONDENCE DATA

Fax Number: (208)975-6667

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.

Phone: 2088133905

Email: jared@colbynipper.com **COLBY NIPPER - MARVELL Correspondent Name:** 

Address Line 1: 291 E. SHORE DRIVE

Address Line 2: SUITE 200

Address Line 4: EAGLE, IDAHO 83616

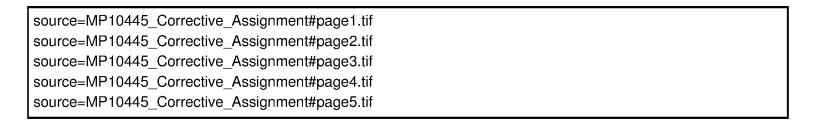
ATTORNEY DOCKET NUMBER:	MP10445
NAME OF SUBMITTER:	MICHAEL K. COLBY, REG#45,816
SIGNATURE:	/Michael K. Colby/
DATE SIGNED:	01/07/2020
	·

Total Attachments: 5

**PATENT** REEL: 051446 FRAME: 0046

EPAS ID: PAT5898743

505851806



PATENT REEL: 051446 FRAME: 0047

## 505179136 11/07/2018

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 EPAS ID: PAT5225904 Stylesheet Version v1.2

SUBMISSION TYPE:NEW ASSIGNMENTNATURE OF CONVEYANCE:ASSIGNMENT

## **CONVEYING PARTY DATA**

Name	Execution Date
XIAYU ZHENG	10/12/2018
HONGYUAN ZHENG	10/12/2018
SUDHIR SRINIVASA	10/12/2018

## **RECEIVING PARTY DATA**

Name:	MARVELL SEMICONDUCTOR, INC.
Street Address:	5488 MARVELL LANE
City:	SANTA CLARA
State/Country:	CALIFORNIA
Postal Code:	95054

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16163167

## **CORRESPONDENCE DATA**

**Fax Number:** (408)222-2755

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.

**Phone:** 408-222-2500

**Email:** kimberly@marvell.com

Correspondent Name: KELVIN VIVIAN

Address Line 1: 5488 MARVELL LANE

Address Line 4: SANTA CLARA, CALIFORNIA 95054

ATTORNEY DOCKET NUMBER: MP10445

NAME OF SUBMITTER: KELVIN VIVIAN

SIGNATURE: /Kelvin Vivian/

DATE SIGNED: 11/07/2018

**Total Attachments: 2** 

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PATENT 505179136 REEL: 0**57**446 FRAME: 00**2**8

Docket#: MP10445 PATENT

#### ASSIGNMENT

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

## Xiayu Zheng, Hongyuan Zhang, Sudhir Srinivasa

who have created a certain invention for which an application for United States Letters Patent was filed on October 17, 2018, accorded Serial Number 16/163,167 herewith and entitled:

# Apparatus and Methods for Interference Cancellation in Multi-Antenna Receivers

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;

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 Applications(s) No(s). 62/630,120, filed February 13, 2018, entitled Multi-Antenna Receiver with Interference Cancellation, 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;

Agrees that Marvell Semiconductor, Inc., hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

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

**PATENT** Docket#: MP10445

Full Name of Second Inventor:	
Hongyuan Zhang	
Inventor's Signature:	Date: Month/Day/Year
HUNTO	8/8/249
	,
Full Name of Third Inventor:	
Sudhir Srinivasa	
Inventor's Signature:	

Accepted on behalf of:

MARVELL SEMICONDUCTOR, INC.

Name: Kelvin Vivian Title: Director, Assistant General Coonsol, IP Development

August 12,2019

### ASSECTION

For york bid valuable consideration, the compute which is hereby seknowledged, each of incide indecembed,

Stayn Zheng, Mongraan Zheng, Sudhir Semirasa

s ho have bread to certain investion for when an application for United States forced was executed to best of as concurrently have with an Lendiet.

# APPARATUS AND METHODS FOR INTERPREDE CANCELLATION IN MOLTI-ANTENNA RECEIVERS

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Does hereby further self, axign and transfer to Marcell Same adjacet, the includessive assigns, and legal acpresentatives. Her full and exclusive again to United States Provisional Placet. Applications (1) News), EU/CO, 20, 10(ci) February 13, 20(s), entitled MULCH and EENNA RECEIVER WITH EFFERENCE CANCELL ATION, and for any and all inventional described in and provisional patient applications) for the United States, its performances and all foreign countries and the entire right title and interest in and to any and all foreign countries, and its dark before any and all foreign countries, and its any and all communities in-pair confinements dividing substances retiseas, extensions thereof and all enter applications for Letters Patent exhibiting thereto which have been or shall be from a the United States, its removable possessions and/or any foreign countries, and all against together with all proppy against under any of the integralities of conventions, unions, agreements, acts, and including all litture conventions, unions, agreements acts, and including all litture conventions, unions, agreements acts, and including all litture conventions, unions, agreements acts, and includes.

Agrees that Markett Semiconductor, the, hereinning inferror to its Assignee, any apply for and receive Letters Patient by said incoming useful incoming hereinning referred to as said incoming, in its explainment, in the Englanders and the Short said incoming, in its explainment, in the Englanders and the Explanation school points of this assignment, at the Explanations of said Assignee. Its successors, assigns and legal representatives, the undersigned will execute all originalities inspect, communities, incomes allowed the englanders, related extentions thereof, execute all rightful online assignments, possitive and other papers, leadify in any logic original legal proceedings, communicate to said Assignee, its successors, assigns or legal representatives all their inspection the undersigned relating to said invention and the history thereofy and generally the everything possible orbits and Assignee, its successors while maider desirable for miding in securing manufactors for patients proper patient processing to said invention and for vesting title to said invention and applications for patients desard invention in said Assignee, its successors explaints to logic representatives, and

Covernants with sair). Addigned all successors, assigns, or legal representative, that no assignment, class, martiage list agrees an affecting the rights and properly because conveyed has been made to relieve by the audersagned, and that fall right to convey the same as because pressed is possessed by the auders good.

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Full Name of Second Inventor	
Hongyum Zhang	
Inventor Signature	Date: Month/Day/Year
1-6-27-2-67-7	19/14/18
Trill Name of Third Inventor	
Sudhir Sciarcasa	
Inventor's Signature	
Shikus	10 1 12 7 24 2

Accepted on behalf of

MARNELL SEMICONDUCTOR, INC.

85.

Name: Kelvin Vivian

Table Director, Intellectual Property

Date 15 OCTOBER 2018