505770249 11/13/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5817065

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HAO PAN	11/05/2019
HAITAO GUO	11/08/2019
KE CHEN	11/05/2019
FRANCESCO IACOPINO	11/05/2019
JIM C. CHOU	10/25/2019
XIAOHUA YANG	11/06/2019
LINFENG GUO	11/05/2019
MUNEHIRO NAKAZATO	11/05/2019
KRISHNAKANTH RAPAKA	11/05/2019
YE CONG	11/13/2019

RECEIVING PARTY DATA

Name:	APPLE INC.
Street Address:	ONE APPLE PARK WAY
Internal Address:	M/S 169 3IPL
City:	CUPERTINO
State/Country:	CALIFORNIA
Postal Code:	95014

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16580184

CORRESPONDENCE DATA

Fax Number:

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.

Email: mail@fernando-ip.com

Correspondent Name: FERNANDO & PARTNERS LLP

Address Line 1: 2712 AUGUSTINE DRIVE

Address Line 2: SUITE 240

Address Line 4: SANTA CLARA, CALIFORNIA 95054

PATENT REEL: 050990 FRAME: 0051

505770249

ATTORNEY DOCKET NUMBER: 27753-50222US1	
NAME OF SUBMITTER:	PRATEEK BHATNAGAR
SIGNATURE: /Prateek Bhatnagar/	
DATE SIGNED: 11/13/2019	
Total Attachments: 5 source=2019-11-13_P38509US1_Assignment_27753-50222US1#page1.tif source=2019-11-13_P38509US1_Assignment_27753-50222US1#page2.tif	

source=2019-11-13_P38509US1_Assignment_27753-50222US1#page1.tif source=2019-11-13_P38509US1_Assignment_27753-50222US1#page2.tif source=2019-11-13_P38509US1_Assignment_27753-50222US1#page3.tif source=2019-11-13_P38509US1_Assignment_27753-50222US1#page4.tif source=2019-11-13_P38509US1_Assignment_27753-50222US1#page5.tif

> PATENT REEL: 050990 FRAME: 0052

ASSIGNMENT

WHEREAS WE, Hao Pan residing in Sunnyvale, CA, Haltao Guo residing in Cupertino, CA, Ke Chen residing in Sunnyvale, CA, Francesco lacopino residing in Los Gatos, Jim C. Chou residing in San Jose, CA, Xiaohua Yang residing in San Jose, CA, Linteng Guo residing in Cupertino, CA, Munehiro Nakazato residing in San Jose, CA, Krishnakanth Rapaka residing in San Jose, CA, and Ye Cong residing in Santa Clara, CA (the "ASSIGNORS") are the inventors of the invention in MULTI-BAND RATE CONTROL, described in an application for a Patent of the United States

- which is executed on even date herewith
- which is identified by Fernando & Partners, LLP docket no. 27753-50222US1
- which was filed on September 24, 2019, Application No. 16/580,184

and WHEREAS, Apple Inc. ("ASSIGNEE"), a corporation, having a place of business at One Apple Park Way, M/S 169 3IPL, Cupertino, CA 95014, is desirous of obtaining our entire right, title and interest in, to and under said invention and said application:

NOW, THEREFORE, let it be known that for and in consideration of the sum of One Dollar (\$1.00) to us paid, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, we, said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under said invention, and said United States application and all divisions, renewals and continuations thereof. and any substitute applications therefore, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; said United States provisional patent application(s), if any, on which said United States application claims priority; and all applications for intellectual property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application and said United States provisional patent application(s), if any, under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of intellectual property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof:

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of intellectual property protection on applications as aforesaid, to issue the same to said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, we hereunto set my hand and seal the day and year set opposite our signature.

Mour	Date: 11/5/2019
Hao Pan	11/8/0.4
Haitac Guo	Date: **(O/ all)
Ke Chen	Date: 11/5/2019
Francesco Jaconino	Date: 11/5/2019

· · · · · · · · · · · · · · · · · · ·	<u> </u>	uate:
Jim C. Chou		
		Date: 11/6/2019
Xiaohua Yang		
Interest		Date: 11/5/ 2019
Linfeng Guo		
		Date: 1/5/20/9
Munehiro Nakazato		
		Date:
Krishnakanth Rapaka		
		Date:
Ye Cong	S	

Jim C. Chou	Date: 10/25/19
Xiaohua Yang	Date:
Linfeng Guo	Date:
Munehiro Nakazato	Date:
Krishnakanth Rapaka	Date:
Ye Cong	Date:

	Date:
Jim C. Chou	
	Date:
Xiaohua Yang	
	Date:
Linfeng Guo	
Bf	Date:
Munehiro Nakazato	
Run	Date: 11/05/2019
Krishnakanth Rapaka	
	Date:
Ye Cong	

	Date:
Jim C. Chou	
Xiaohua Yang	Date:
Linfeng Guo	Date:
Munehiro Nakazato	Date:
Krishnakanth Rapaka	Date:
Ye Cong	Date: 11 /13/20/9