

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT3960412

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ZHIPING JIANG	06/30/2016
TEJIA LIU	06/30/2016
HONG YANG	06/30/2016
DAJIANG JIN	07/01/2016
MINGGANG SI	06/30/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	HUAWEI TECHNOLOGIES CO., LTD.
<b>Street Address:</b>	HUAWEI ADMINISTRATION BUILDING, BANTIAN
<b>Internal Address:</b>	LONGGANG DISTRICT, GUANGDONG
<b>City:</b>	SHENZHEN
<b>State/Country:</b>	CHINA
<b>Postal Code:</b>	518129
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15200325
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(972)732-9218
<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>	972-732-1001
<b>Email:</b>	docketing@slatermatsil.com
<b>Correspondent Name:</b>	SLATER MATSIL LLP
<b>Address Line 1:</b>	17950 PRESTON ROAD, SUITE 1000
<b>Address Line 4:</b>	DALLAS, TEXAS 75252
<b>ATTORNEY DOCKET NUMBER:</b>	HW 84978991US02
<b>NAME OF SUBMITTER:</b>	SHANDY L. SARCHET
<b>SIGNATURE:</b>	/Shandy L. Sarchet/
<b>DATE SIGNED:</b>	07/13/2016
<b>Total Attachments: 4</b>	

source=HWC 84978991US02 Assignment - need one more signature#page1.tif

source=HWC 84978991US02 Assignment - need one more signature#page2.tif

source=HWC 84978991US02 Assignment - need one more signature#page3.tif

source=HWC 84978991US02 Assignment - need one more signature#page4.tif

## ASSIGNMENT

---

WHEREAS, I/We, the undersigned inventor(s) (or one of the undersigned joint inventors), of residence as listed below, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

WHEREAS, Huawei Technologies Co., Ltd. ("Assignee"), a corporation organized and existing under the laws of China, having a principal place of business at Huawei Administration Building, Bantian, Longgang, Shenzhen, Guangdong, 518129 China, is desirous of acquiring my/our entire right, title and interest in the said invention, and to the said application and any Letters Patent that may issue thereon in the United States and all other countries throughout the world;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I/we will assign, and hereby assign and transfer to the Assignee and the Assignee's legal representatives, successors and assigns the full and exclusive right, title and interest in and to the invention in the United States and every other country and the entire right, title, and interest in and to the patent application and other such applications (e.g., provisional applications, non-provisional applications, continuations, continuations-in-part, divisional, reissues, reexaminations, National Phase applications, including petty patent applications, and utility model applications) that may be filed in the United States and every other country on the invention, and the patents, extensions, or derivations thereof, both foreign and domestic, that may issue thereon, and I/we do hereby authorize and request the Commissioner for Patents to issue U.S. patents for said invention, or patent resulting therefrom, insofar as my/our interest is concerned, to the Assignee agreeably with the terms of this assignment document.

I/we also hereby agree to sell and to assign, and sell and assign to Assignee, its successors and assigns, my/our international rights to the invention disclosed in said application, in all countries of the world, including, but not limited to, the right to file applications and obtain patents under the terms of any International Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I/we hereby further agree that I/we will communicate to Assignee, or its successors, assigns, and legal representative, any facts known to me/us respecting said invention or the file history thereof, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all documents required for divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid such Assignee, its successors, assigns and nominees to obtain and enforce proper patent protection for said



## ASSIGNMENT



invention in all countries.

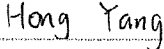

I/we hereby authorize Assignee to modify this Assignment at a later date for the purpose of adding information to better identify the invention, such as the application serial number, and filing date of a patent application filed thereon.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

Title of Invention	<b>METHOD AND APPARATUS FOR PROVIDING A PILOT TONE</b>	
	Appl. No.	Filing Date:

Signature of Inventor:		
Inventor Name:	<b>Zhiping Jiang</b>	Date <b>June 30, 2016</b>
Residence (City/State):	<b>Kanata, ON, Canada</b>	
Signature of Witness:		
Witness Name:	<b>HAITAO SUN</b>	Date <b>June 30, 2016</b>
Residence (City/State):	<b>OTTAWA / ON</b>	

Signature of Inventor:		
Inventor Name:	<b>Tejia Liu</b>	Date <b>June 30, 2016</b>
Residence (City/State):	<b>Shenzhen, China</b>	
Signature of Witness:		
Witness Name:	<b>Huijuan Huang</b>	Date <b>June 30, 2016</b>
Residence (City/State):	<b>Shenzhen, China</b>	

Signature of Inventor:		
Inventor Name:	<b>Hong Yang</b>	Date <b>June 30, 2016</b>
Residence (City/State):	<b>Shenzhen, China</b>	
Signature of Witness:		
Witness Name:	<b>Jiecheng Huang</b>	Date <b>June 30, 2016</b>
Residence (City/State):	<b>Shenzhen, China</b>	

### ASSIGNMENT

Signature of Inventor:	<i>Dajiang Jin</i>	
Inventor Name:	<i>Dajiang Jin</i>	Date <i>July 1, 2016</i>
Residence (City/State):	<i>Sichuan, China</i>	
Signature of Witness:	<i>Sujie Zhou</i>	
Witness Name:	<i>Sujie Zhou</i>	Date <i>July 1, 2016</i>
Residence (City/State):	<i>Sichuan, China</i>	

Signature of Inventor:		
Inventor Name:	<i>Minggang Si</i>	Date
Residence (City/State):	<i>Shenzhen, China</i>	
Signature of Witness:		
Witness Name:		Date
Residence (City/State):		

### ASSIGNMENT

Signature of Inventor:		
Inventor Name:	Dajiang Jin	Date
Residence (City/State):	Sichuan, China	
Signature of Witness:		
Witness Name:		Date
Residence (City/State):		

Signature of Inventor: <i>Minggang Si</i>		
Inventor Name:	Minggang Si	Date <i>June 30, 2016</i>
Residence (City/State):	Shenzhen, China	
Signature of Witness: <i>Jianmei Zhang</i>		
Witness Name:	<i>Jianmei Zhang</i>	Date <i>June 30, 2016</i>
Residence (City/State):	<i>Shenzhen, China</i>	