

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
BINGZHAO ZHANG	02/23/2017
YONGWANG LIU	02/25/2017
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<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15268120
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<b>SIGNATURE:</b>	/Nicholas K. Beaulieu/
<b>DATE SIGNED:</b>	03/08/2017
<b>Total Attachments: 3</b>	
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PATENT  
Attorney Docket No. 4576-35000  
Client Reference No. 84490671US02

ASSIGNMENT

WHEREAS, WE,

Bingzhao Zhang	Yongwang Liu
Huawei Administration Building	Huawei Administration Building
Bantian, Longgang District	Bantian, Longgang District
Shenzhen, 518129, Guangdong	Shenzhen, 518129, Guangdong
P.R.CHINA; and	P.R.CHINA;

have invented and own a certain invention entitled:

PHASE-LOCKED LOOP CIRCUIT, DATA RECOVERY CIRCUIT, AND CONTROL METHOD FOR PHASE-LOCKED LOOP CIRCUIT

for which invention we have executed an application (provisional or non-provisional) for a U.S. patent, which was filed on 2016-09-16, under U.S. Application No. 15268120 and

WHEREAS, HUAWEI TECHNOLOGIES CO.,LTD., Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R.CHINA,; hereinafter referred to as Assignee, is desirous of acquiring the entire domestic and foreign right, title, and interest in and under the invention described in the patent application.

NOW, THEREFORE, for good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, we assign and transfer to the Assignee and the Assignee's legal representatives, successors and assigns the full and exclusive rights in and to the invention in the U.S. and every foreign 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, divisionals, reissues, reexaminations, National phase applications, including petty patent applications, and utility model applications) that may be filed in the United States and every foreign country on the invention, and the patents, extensions, or derivations thereof, both foreign and domestic, that may issue thereon, and we do hereby authorize and request the Commissioner of Patents to issue U.S. patents to the above-mentioned Assignee agreeably with the terms of this assignment document.

WE HEREBY AUTHORIZE the Assignee to insert in this assignment document the filing date and application number of the application if the date and number are unavailable at the time this document is executed.

WE DO HEREBY COVENANT and agree with the Assignee that we will not execute any writing or do any act whatsoever conflicting with the terms of this assignment document set

forth herein, and that we will at any time upon request, without further or additional consideration, but at the expense of the Assignee, execute such additional assignments and other writings and do such additional acts as the Assignee may deem necessary or desirable to perfect the Assignee's enjoyment of this assignment, and render all necessary assistance in making application for and obtaining original, continuation, continuation-in-part, divisional, reissued, reexamined, and National phase patents of the U.S. or of any and all foreign countries on the invention, and in enforcing any rights or chooses in action accruing as a result of such

In re Appln. of Zhang et al.  
Attorney Docket No. 4576-35000

applications or patents, and by executing statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of, the assigns and legal representatives of all parties hereto.

IN WITNESS WHEREOF, We have hereunder set our hands on the dates shown below.

Date Feb 23, 2017

Bingzhao Zhang  
Bingzhao Zhang

Date \_\_\_\_\_

\_\_\_\_\_  
Yongwang Liu

In re Appln. of Zhang et al.  
Attorney Docket No. 4576-35000

on the invention, and in enforcing any rights or chooses in action accruing as a result of such applications or patents, and by executing statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of, the assigns and legal representatives of all parties hereto.

IN WITNESS WHEREOF, We have hereunder set our hands on the dates shown below.

Date \_\_\_\_\_

\_\_\_\_\_  
Bingzhao Zhang

Date Feb 25, 2017

Yongwang Liu  
\_\_\_\_\_  
Yongwang Liu