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PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
Ning LIU	02/17/2012

RECEIVING PARTY DATA

Name:	HUAWEI TECHNOLOGIES CO., LTD.	
Street Address:	Huawei Administration Building, Bantian, Longgang District	
City:	Shenzhen, Guangdong, P.R.	
State/Country:	CHINA	
Postal Code:	518129	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13406908

CORRESPONDENCE DATA

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Address Line 2: NW

Address Line 4: Washington, DISTRICT OF COLUMBIA 20001

ATTORNEY DOCKET NUMBER:	11005.0649
NAME OF SUBMITTER:	R. CREMEANS

Total Attachments: 2

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> PATENT REEL: 027774 FRAME: 0715

OF \$40.00 13406908

Attorney Docket No. Client Reference No. 0989494US

ASSIGNMENT

WHEREAS, I,

Ning LIU HuaweiAdministrationBuilding, Bantian, Longgang District, Shenzhen, 518129, Guangdong, P.R. China

have invented and own a certain in METHOD AND DEVICE FOR RATIO	vention entitled: DETECTING II	NBAND OPTICAL	. SIGNAL TO) NOISE
for which invention we have execupatent, which was filed on	ated an application under U.S	n (provisional or no . Application No	n-provisional)	for a U.S. , and

WHEREAS, HUAWEI TECHNOLOGIES CO., LTD., of 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 petry 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 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.

REEL: 027774 FRAME: 0716

In re Appln. of Liu et	l.	
Attorney Docket No.		

IN WITNESS V HEE! DF, we have hereunder set our hands on the dates shown below.

Date_	Feb 17	2017	Ming LIU
Date_	Feb 17	2012	Ning LIU Tena Ma
Date_	Feb 17	2012	Witness Jun He Witness