## 506097923 06/09/2020

# PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
QINGMING XIE	06/05/2020
JIANPING ZHAO	06/08/2020
YANG GENG	06/05/2020

### **RECEIVING PARTY DATA**

Name:	HUAWEI TECHNOLOGIES CO., LTD.
Street Address:	HUAWEI ADMINISTRATION BUILDING
Internal Address:	BANTIAN, LONGGANG DISTRICT
City:	SHENZHEN, GUANGDONG
State/Country:	CHINA
Postal Code:	518129

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16584500

### **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:** sharon.chung@wbd-us.com, ipdocketing@wbd-us.com,

BSTZKGSreport@wbd-us.com

Correspondent Name: WOMBLE BOND DICKINSON (US) LLP /HUAWEI A

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ATTORNEY DOCKET NUMBER:	210167.0809.6 (P797)
NAME OF SUBMITTER:	KEVIN G. SHAO
SIGNATURE:	/Kevin G. Shao/
DATE SIGNED:	06/09/2020

**Total Attachments: 5** 

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PATENT 506097923 REEL: 052882 FRAME: 0368

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# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN **APPLICATION DATA SHEET (37 CFR 1.76)**

Title of Invention	METHOD
As the belo	w named inventor, I hereby declare that:
This declar	
	United States application or PCT international application number 16584500 filed on 2019-09-26
The above-i	identified application was made or authorized to be made by me.
I believe tha	at I am the original inventor or an original joint inventor of a claimed invention in the application.
	cnowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 aprisonment of not more than five (5) years, or both.
	WARNING:
contribute to (other than a to support a petitioners/a USPTO. Pe application ( patent. Furt referenced in	policant is cautioned to avoid submitting personal information in documents filed in a patent application that may identify theft. Personal information such as social security numbers, bank account numbers, or credit card numbers a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO petition or an application. If this type of personal information is included in documents submitted to the USPTO, pplicants should consider redacting such personal information from the documents before submitting them to the stitioner/applicant is advised that the record of a patent application is available to the public after publication of the unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a hermore, the record from an abandoned application may also be available to the public if the application is n a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms ubmitted for payment purposes are not retained in the application file and therefore are not publicly available.
LEGAL NA	AME OF INVENTOR
Inventor:	Qingming Xie Date (Optional):
Signature:	Qing ming Xie
	ication data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have sly filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 95 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450, DO NOT SEND FEES OR COMPLETED FORMS TO

THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	ANTENN METHOI	IA SYSTEM, SIGNAL PROCESSING SYSTEM, AND SIGNAL PROCESSING  O
As the belo	w named inv	entor, I hereby declare that:
This declar		The attached application, or
	×	United States application or PCT international application number 16584500  filed on 2019-09-26
The above-i	dentified app	lication was made or authorized to be made by me.
I believe tha	t I am the ori	ginal inventor or an original joint inventor of a claimed invention in the application.
I hereby ack by fine or im	nowledge the prisonment o	at any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 f not more than five (5) years, or both.
		WARNING:
contribute to (other than a to support a petitioners/a USPTO. Per application (in patent. Furthal referenced in	identity thefla a check or creat petition or ar pplicants shout titioner/application unless a non hermore, the an a published	Itioned to avoid submitting personal information in documents filed in a patent application that may . Personal information such as social security numbers, bank account numbers, or credit card numbers edit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO application. If this type of personal information is included in documents submitted to the USPTO, and consider redacting such personal information from the documents before submitting them to the card is advised that the record of a patent application is available to the public after publication of the equipolation request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a record from an abandoned application may also be available to the public if the application is application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms becament purposes are not retained in the application file and therefore are not publicly available.
LEGAL NA	ME OF INVI	ENTOR
	Jianping Z	
Signature:	Jaspin	3 Zhao
		eet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have a additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63, The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application, Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450, DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN **APPLICATION DATA SHEET (37 CFR 1.76)**

Title of Invention	METHOD
As the belo	w named inventor, I hereby declare that:
This declar	to: Ine attached application, or
	United States application or PCT international application number 16584500 filed on 2019-09-26
The above-i	identified application was made or authorized to be made by me.
I believe tha	t I am the original inventor or an original joint inventor of a claimed invention in the application.
	nowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 prisonment of not more than five (5) years, or both.
	WA DAUNO.
contribute to (other than a to support a petitioners/a USPTO. Pe application (spatent. Furth referenced in	warning:  oplicant is cautioned to avoid submitting personal information in documents filed in a patent application that may identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO petition or an application. If this type of personal information is included in documents submitted to the USPTO, pplicants should consider redacting such personal information from the documents before submitting them to the titioner/applicant is advised that the record of a patent application is available to the public after publication of the unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a hermore, the record from an abandoned application may also be available to the public if the application is a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms ubmitted for payment purposes are not retained in the application file and therefore are not publicly available.
LEGAL NA	ME OF INVENTOR
Inventor: _ Signature:	Yang Geng Date (Optional):
Note: An appli	cation data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have ly filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450, DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**PATENT REEL: 052882 FRAME: 0372** 

Attorney Docket No. Client Reference No. 85075401US06

### ASSIGNMENT

## WHEREAS, WE,

Qingming Xie Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R.CHINA; and

Yang Geng Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R.CHINA; Jianping Zhao Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R.CHINA; and

have invented and own a certain invention entitled:

ANTENNA SYSTEM, SIGNAL PROCESSING SYSTEM, AND SIGNAL PROCESSING METHOD

for which invention we have executed an application (provisional or non-provisional) for a U.S. patent, which was filed on 2019-09-26, under U.S. Application No. 16584500 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, 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

PATENT REEL: 052882 FRAME: 0373

In re Appln. of Xie et al.	
Attorney Docket No.	

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.

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

Date Jun S. 2020	Qingming Xie Qingming Xie	
Date	Jianping Zhao Jianping Zhao	
Date Jun 5 . 2020	Yang Geng	<del> </del>