# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6046020

| SUBMISSION TYPE:      | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT     |

#### **CONVEYING PARTY DATA**

| Name      | Execution Date |
|-----------|----------------|
| LI HU     | 02/25/2020     |
| JING CHEN | 02/24/2020     |
| KAI PAN   | 02/24/2020     |
| HE LI     | 02/25/2020     |

# **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: | 16585978 |

# **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.

**Phone:** 404-872-7000

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

bstzkgsreport@wbd-us.com

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

Address Line 1: P.O. BOX 7037

Address Line 4: ATLANTA, GEORGIA 30357-0037

| ATTORNEY DOCKET NUMBER: | 210167.0827.4 (P812) |
|-------------------------|----------------------|
| NAME OF SUBMITTER:      | KEVIN G. SHAO        |
| SIGNATURE:              | /Kevin G. Shao/      |
| DATE SIGNED:            | 04/03/2020           |

**Total Attachments: 10** 

source=85361688US05\_Declaration#page1.tif

| source=85361688US05_Declaration#page2.tif |
|---|
| source=85361688US05_Declaration#page3.tif |
| source=85361688US05_Declaration#page4.tif |
| source=85361688US05 Assignment#page1.tif  |
| source=85361688US05 Assignment#page2.tif  |
| source=85361688US05 Assignment#page3.tif  |
| source=85361688US05 Assignment#page4.tif  |
| source=85361688US05 Assignment#page5.tif  |
| source=85361688US05 Assignment#page6.tif  |

Approved for use through 01/31/2014. OMB 0551-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB confrol number.

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

| Title of<br>Invention  | COMMUNICATION METHOD AND DEVICE  |
|--|--|
| As the belo  | w named inventor, I hereby declare that:   |
| This declars is directed to  | i i the attached anniication of  |
| The above-i  | dentified 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.   |
|  | WARNING:   |
| contribute to<br>(other than a<br>to support a<br>petitioners/a<br>USPTO. Pe<br>application (<br>patent. Furt<br>referenced in | policant 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 no 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: _  | 11)  |
|  | 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 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.

PTO/AIA/01 (06-12)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

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

| Title of<br>Invention   | COMMUNICATION METHOD AND DEVICE   |  |
|---|---|--|
| As the belo   | w named inventor, 1 hereby declare that:  |  |
| This declar<br>is directed t  |   |  |
| The above-  | identified application was made or authorized to be made by me.   |  |
| l believe tha   | at I am the original inventor or an original joint inventor of a claimed invention in the application.  |  |
| I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. |   |  |
|   | WARNING:  |  |
| contribute to<br>(other than a<br>to support a<br>petitioners/a<br>USPTO. Pe<br>application (<br>patent. Furt<br>referenced i   | oplicant is cautioned to avoid submitting personal information in documents filed in a patent application that may be 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, applicants should consider redacting such personal information from the documents before submitting them to the attitioner/applicant is advised that the record of a patent application is available to the public after publication of the junless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a thermore, 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 submitted for payment purposes are not retained in the application file and therefore are not publicly available. |  |
| LEGAL NA  | AME OF INVENTOR   |  |
| Inventor:   | Jing Chen  Date (Optional): Feb. 24 2020  Jing Chen   |  |
|   | lication 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 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.

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

| Title of<br>Invention  | COMMUNICATION METHOD AND DEVICE   |
|--|---|
| As the belo  | w named inventor, I hereby declare that:  |
| This declaration is directed to  | I The attached application of   |
| The man and a second   | ▼ United States application or PCT international application number 16585978  |
|  | <br>filed on 2019-09-27   |
| 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.  |
|  | knowledge 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<br>(other than a<br>to support a<br>petitioners/a<br>USPTO. Pe<br>application (i<br>patent. Furtl<br>referenced ir | oplicant is cautioned to avoid submitting personal information in documents filed in a patent application that may be 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, applicants should consider redacting such personal information from the documents before submitting them to the attitioner/applicant is advised that the record of a patent application is available to the public after publication of the funless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a thermore, 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 submitted for payment purposes are not retained in the application file and therefore are not publicly available. |
| LEGAL NA   | AME OF INVENTOR   |
| Inventor:  | He Li Date (Optional) :   |
| Signature:   |   |
|  | lication 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 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.

PTO/AIA/01 (06-12)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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<br>Invention   | COMMUNICATION METHOD AND DEVICE  |  |
|---|--|--|
| As the belo   | w named inventor, I hereby declare that:   |  |
| This declarated to the declarate of the | I The attached application of  |  |
| The above-i   | dentified 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.  |  |
| I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.   |  |  |
|   | WARNING:   |  |
| Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.  |  |  |
| LEGAL NA  | AME OF INVENTOR  |  |
| Inventor: _<br>Signature:   | ! 1 .  |  |
|   | 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.

# Attorney Docket No. Client Reference No. 85361688US05

#### ASSIGNMENT

# WHEREAS, WE,

Li Hu

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

He Li

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

Jing Chen

Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R.CHINA: and

Kai Pan

Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong

P.R.CHINA;

have invented and own a certain invention entitled:

# COMMUNICATION METHOD AND DEVICE

for which invention we have executed an application (provisional or non-provisional) for a U.S. patent, which was filed on 2019-09-27, under U.S. Application No. 16585978 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

1

| In re Appln. of Hu et al. Attorney Docket No.  |   |
|--|---|
| making application for and obtaining origin<br>reissued, reexamined, and National phase pa<br>on the invention, and in enforcing any right<br>applications or patents, and by executing st | ssignment, and render all necessary assistance in nal, continuation, continuation-in-part, divisional, tents of the U.S. or of any and all foreign countries is or chooses in action accruing as a result of such atements and other affidavits, it being understood shall bind, and inure to the benefit of, the assigns of. |
| IN WITNESS WHEREOF, We have here   | under set our hands on the dates shown below.   |
| Date Feb. 25. 2020.  | Li Hu   |
| Date   | Jing Chen   |

He Li

Kai Pan

Date\_

Date

#### ASSIGNMENT

# WHEREAS, WE,

Li Hu

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

He Li

Huawei Administration Building Bantian, Longgang District Shenzhen, 518129. Guangdong

P.R.CHINA; and

Jing Chen

Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R.CHINA: and

Kai Pan

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

have invented and own a certain invention entitled:

# COMMUNICATION METHOD AND DEVICE

for which invention we have executed an application (provisional or non-provisional) for a U.S. patent, which was filed on 2019-09-27, under U.S. Application No. 16585978 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

1

| In re Appln. of Hu et al. |  |
|---------------------------|--|
| Attorney Docket No.       |  |

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              | Li Hu               |
|-------------------|---------------------|
| Date Feb 24, 2020 | Jing Chen Jing Chen |
| Date              | He Li               |
| Date Feb 24, 2020 | Kai Pan             |

# ASSIGNMENT

# WHEREAS, WE,

Li Hu

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

He Li

Huawei Administration Building Bantian, Longgang District Shenzhen, 518129. Guangdong

P.R.CHINA; and

Jing Chen

Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R.CHINA: and

Kai Pan

Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong

P.R.CHINA;

have invented and own a certain invention entitled:

# COMMUNICATION METHOD AND DEVICE

for which invention we have executed an application (provisional or non-provisional) for a U.S. patent, which was filed on 2019-09-27, under U.S. Application No. 16585978 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

| and legal representatives of all parties hereto.  IN WITNESS WHEREOF, We have hereunder set of                     | our hands on the dates shown below. |
|--|-------------------------------------|
| applications or patents, and by executing statements that the foregoing covenant and agreement shall bind          | , 2                                 |
| reissued, reexamined, and National phase patents of the<br>on the invention, and in enforcing any rights or choose |                                     |
| making application for and obtaining original, contin  |                                     |
| perfect the Assignee's enjoyment of this assignment  |                                     |
| Attorney Docket No   |                                     |
|  |                                     |

Li Hu

Jing Chen

Kai Pan

Date

Date February 25.2020

Date\_\_\_\_