

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT7440940

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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>                   |
| BIN WANG  | 05/26/2015                              |
| ZEXIN LIU   | 05/26/2015                              |
| LEI MIAO  | 05/26/2015                              |
| <b>RECEIVING PARTY DATA</b>   |   |
| <b>Name:</b>  | HUAWEI TECHNOLOGIES CO., LTD.           |
| <b>Street Address:</b>  | Huawei Administration Building          |
| <b>Internal Address:</b>  | Bantian, Longgang District              |
| <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:   | 17868879                                |
| <b>CORRESPONDENCE DATA</b>  |   |
| <b>Fax Number:</b>  | (972)731-2289                           |
| <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> |   |
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| <b>ATTORNEY DOCKET NUMBER:</b>  | 4657-45702 (83681478US96)               |
| <b>NAME OF SUBMITTER:</b>   | NICHOLAS K. BEAULIEU                    |
| <b>SIGNATURE:</b>   | /Nicholas K. Beaulieu/                  |
| <b>DATE SIGNED:</b>   | 07/20/2022                              |
| <b>Total Attachments: 2</b>   |   |
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| source=4657-45702_signed_Assignment#page2.tif   |   |

**ASSIGNMENT**

**WHEREAS, WE,**

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

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

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

have invented and own a certain invention entitled:  
**ENCODING METHOD, DECODING METHOD, ENCODING APPARATUS, AND  
DECODING APPARATUS**  
for which invention we have executed an application (provisional or non-provisional) for a U.S.  
patent, which was filed on 07/20/2022, under U.S. Application No. 17/868,879 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 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

In re Appln. of WANG et al.  
Attorney Docket No. 4657-45702

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 May 26, 2015 Bin WANG  
Bin WANG

Date May 26, 2015 Zexin LIU  
Zexin LIU

Date May 26, 2015 Lei MIAO  
Lei MIAO