

FORM PTO-1619A
Expires 08/30/99
OMB 0651-0027

U.S. Department of Commerce
Patent and Trademark Office
PATENT

RECORDATION FORM COVER SHEET PATENTS ONLY

TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).

Submission Type

- ☐ New
- ☒ Resubmission (Non-Recordation)

Document ID# 700509418

- ☒ Correction of PTO Error

Reel # 029556 Frame # 0296

- ☐ Corrective Document

Reel # Frame #

Conveyance Type

- ☒ Assignment ☐ Security Agreement

- ☐ License ☐ Change of Name

- ☐ Merger

- ☐ Other

U.S. Government

(For Use ONLY by U.S. Government Agencies)

- ☐ Departmental File ☐ Secret File

Conveying Party(ies)

- ☒ Mark if additional names of conveying parties attached

Name (line 1) Huafeng Wen

Execution Date
Month Day Year
Dec. 26, 2012

Name (line 2)

Second Party

Name (line 1) Wenhai Wang

Execution Date
Month Day Year
Dec. 26, 2012

Name (line 2)

Receiving Party

- ☐ Mark if additional names of receiving parties attached

Name (line 1) Huawei Technologies Co., Ltd.

Name (line 2)

Address (line 1) Huawei Administration Building

Address (line 2)

Address (line 3) Bantian, Longgang District

China

518129

City

State/Country

Zip Code

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Domestic Representative Name and Address

Enter for the first Receiving Party only.

Name

Address (line 1)

Address (line 2)

Address (line 3)

Address (line 4)

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Mail documents to be recorded with required cover sheet(s) information to:
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PATENT

700511116

REEL: 031447 FRAME: 0212

FORM PTO-1619B
Expires 08/30/99
OMB 0651-0027

Page 2

U.S. Department of Commerce
Patent and Trademark Office
PATENT**Correspondent Name and Address**

Area Code and Telephone Number (972) 628-3600

Name Docket Clerk

Address (line 1)

Address (line 2) P.O. Drawer 800889

Address (line 3) Dallas, Texas 75380

Address (line 4)

PagesEnter the total number of pages of the attached conveyance document
including any attachments.

#

Application Number(s) or Patent Number(s)☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

13/732,845

Patent Number(s)

If this document is being filed together with a new Patent Application, enter the date the patent application was
signed by the first named executing inventor.

Month Day Year

Patent Cooperation Treaty (PCT)

Enter PCT application number

only if a U.S. Application Number
has not been assigned.

PCT

PCT

PCT

PCT

PCT

PCT

Number of Properties

Enter the total number of properties involved.

#

1

Fee Amount

Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00

Method of Payment:

Deposit Account

Enclosed ☐Deposit Account ☒

(Enter for payment by deposit account or if additional fees can be charged to the account.)

Deposit Account Number:

50-0208

Authorization to charge additional fees:

Yes

☒

No

☐**Statement and Signature**

To the best of my knowledge and belief, the foregoing information is true and correct and any
attached copy is a true copy of the original document. Charges to deposit account are authorized, as
indicated herein.

Robert D. McCutcheon

Name of Person Signing



Signature

10/3/2013

Date

PATENT

REEL: 031447 FRAME: 0213

FORM PTO-1619C
Expires 06/30/99
OMB 0651-0027RECORDATION FORM COVER SHEET
CONTINUATION
PATENTS ONLYU.S. Department of Commerce
Patent and Trademark Office
PATENT

Conveying Party(ies)

☐ Mark if additional names of conveying parties attached

Enter additional Conveying Parties

Name (line 1) Li Qin

Execution Date
Month Day Year

Dec. 26, 2012

Name (line 2)

Execution Date
Month Day Year

Name (line 1)

Name (line 2)

Name (line 1)

Execution Date
Month Day Year

Name (line 2)

Receiving Party(ies)

☐ Mark if additional names of receiving parties attached

Enter additional Receiving Party(ies)

Name (line 1)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)

City

State/Country

Zip Code

Name (line 1)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)

City

State/Country

Zip Code

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Application Number(s) or Patent Number(s)

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

PATENT

REEL: 031447 FRAME: 0214

502181251 01/02/2013

PATENT ASSIGNMENT

Electronic Version v1.1
Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT								
NATURE OF CONVEYANCE:	ASSIGNMENT								
CONVEYING PARTY DATA									
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Huafeng Wen</td><td>12/26/2012</td></tr><tr><td>Wenhui Wang</td><td>12/26/2012</td></tr><tr><td>Li Qin</td><td>12/26/2012</td></tr></tbody></table>		Name	Execution Date	Huafeng Wen	12/26/2012	Wenhui Wang	12/26/2012	Li Qin	12/26/2012
Name	Execution Date								
Huafeng Wen	12/26/2012								
Wenhui Wang	12/26/2012								
Li Qin	12/26/2012								
RECEIVING PARTY DATA									
Name:	Huawei Technologies Co., Ltd.								
Street Address:	Huawei Administration Building, Bantian, Longgang District,								
City:	Shenzhen, 518129, Guangdong, P.R.								
State/Country:	CHINA								
PROPERTY NUMBERS Total: 1									
<table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>13732845</td></tr></tbody></table>		Property Type	Number	Application Number:	13732845				
Property Type	Number								
Application Number:	13732845								
CORRESPONDENCE DATA									
Fax Number:	9726283616								
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>									
Phone:	972 628 3600								
Email:	patents@munckwilson.com								
Correspondent Name:	Docket Clerk/HTCL								
Address Line 1:	P.O. Drawer 800889								
Address Line 4:	Dallas, TEXAS 75380								
NAME OF SUBMITTER:	Robert D. McCutcheon								
Total Attachments: 2 source=Assignment#page1.tif source=Assignment#page2.tif									

CH \$40.00 13732845

PATENT

Attorney Docket No. _____
Client Reference No. 82504226U504

ASSIGNMENT**WHEREAS, WE,**

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

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

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

have invented and own a certain invention entitled:
METHOD AND APPARATUS FOR TOPOLOGY DISCOVERY
for which invention we have executed an application (provisional or non-provisional) for a U.S. patent, which was filed on _____, under U.S. Application No. _____ 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

Division of Women at
 Summary Deck No.

making application for and obtaining or cause to be obtained, continuation, continuation-in-part, divisional, or subsequent-in-part, and national phase patents of the U.S. or of any and all foreign countries, or the prosecution and the enforcing any rights or causes in action according as a result of such applications or patents, and by executing statements and other documents, and by doing and causing to be done, foregoing covenant and agreement shall bind and inure to the benefit of said signers and legal representatives of all parties hereto.

IN WITNESS WHEREOF, we have signed and affixed our hands to the foregoing

Date December 4, 2013

Hindley WFM

Witness

Date December 6, 2013

Hindley WFM

Witness

Date December 26, 2013

Hindley WFM

Witness

Date December 26, 2013

Hindley WFM

Witness

Date December 26, 2013

Hindley WFM

Witness

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