PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------|----------------|
| Jie Ma | 09/16/2010 |
| Yi Zhang | 09/21/2010 |
| Jinlin Zhang | 09/14/2010 |
| Jun Chen | 09/14/2010 |
| Xiaofei Ma | 09/21/2010 |

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: | 12890246 |

CORRESPONDENCE DATA

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Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

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Email: mcalderon@brinkshofer.com

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ATTORNEY DOCKET NUMBER: 13674-371

PATENT

REEL: 025147 FRAME: 0665

P.O. Box 10395

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| NAME OF SUBMITTER: | Gustavo Siller, Jr. |
|--|---------------------|
| Total Attachments: 6 source=13674-371Assignment#page1.tif source=13674-371Assignment#page2.tif source=13674-371Assignment#page3.tif source=13674-371Assignment#page4.tif source=13674-371Assignment#page5.tif source=13674-371Assignment#page6.tif | |

PATENT REEL: 025147 FRAME: 0666

Client/Matter No. 13674-371 Client Ref. No. 0814549US

| | RECORDATION FORM COVER SHEET PATENTS ONLY | | | | |
|--|--|--|---------------------------------------|--|---|
| To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below | | | cuments or the new address(es) below: | | |
| 1. | Name of cor | nveying Party(ies): | 2. | Name and Add | ress of receiving Party(ies): |
| | JIE MA/SEPTEMBER 16, 2010 YI ZHANG/SEPTEMBER 21, 2010 JINLIN ZHANG/SEPTEMBER 14, 2010 JUN CHEN/SEPTEMBER 14, 2010 | | | Name: | HUAWEI TECHNOLOGIES CO., LTD. |
| | lditional name(s) | OFEI MA/SEPTEMBER 21, 2010 of conveying party(ies) attached? ☐ Yes ☑ No onveyance/Execution Date(s): | | I Address: | Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R. China |
| <u>20</u> | Assignme Security Joint Res Governm | | | Additional name(s) | and addresses attached? ☐ Yes ⊠ No |
| 4. Application or Patent Number(s). This document is being filed together with a new application. | | | | | |
| A. | Patent Applic 12/890,246 | eation No.(s): Additional numbers attac | | Patent No.(s): | |
| 5. | | ddress of party to whom correspondence document should be mailed: | 6. | Total no. of app | plications & patents involved: 1 |
| | P C P | BRINKS HOFER GILSON & LIONE PO BOX 10395 CHICAGO, IL 60610 Phone: (312) 321-4200 Fax: (312) 321-4299 | 8. a. | Authorize of Authorize of Authorize of Enclosed None requi | Last 4 Numbers Expiration Date nd/or any Deficiencies to Deposit |
| 9. | Signature: | /Gustavo Siller, Jr./ | | _ | |
| | | Signature | | | October 15, 2010 Date |
| | | Gustavo Siller, Jr. Name of Person Signing | | | pages including coversheet, s and documents: 6 |

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to: Mail Stop Assignment Recordation Services, Director of the USPTO, PO Box 1450, Alexandria, VA 22313-1450

PATENT REEL: 025147 FRAME: 0667

Attorney Docket No. Client Reference No. 0814549US

ASSIGNMENT

WHEREAS, WE,

h60024752 2010-09-25 11:21:18

Jie MA
Huawei Administration Building
Bantian, Longgang District
Shenzhen, 518129, Guangdong
P.R. CHINA; and
Jinlin ZHANG
Huawei Administration Building
Bantian, Longgang District
Shenzhen, 518129, Guangdong
P.R. CHINA; and
Xiaofei MA
Huawei Administration Building
Bantian, Longgang District
Shenzhen, 518129, Guangdong
P.R. CHINA.

Yi ZHANG Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R. CHINA; Jun CHEN Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R. CHINA;

have invented and own a certain invention entitled:

METHOD AND APPARATUS FOR CONTROLLING CARRIER FREQUENCY IN MULTI-CARRIER/CELL SYSTEM

for which invention we have executed an application (provisional or non-provisional) for a U.S. patent, which was filed on <u>September 24,2010</u>, under U.S. Application No. <u>12890246</u>, 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.

PATENT REEL: 025147 FRAME: 0668

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

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.

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

| Date · | September 16,2010 | Jie MA |
|--------|--|-----------------|
| | | J10 141/1 |
| Date _ | September 16, 2010 | Witness Win BAZ |
| Date_ | September 16, 2010 September 16, 2010 | Witness Lin |
| | 1 | Wideob |
| | | |
| | | |
| Date _ | | |
| _ | | Yi ZHANG |
| Date _ | | Witness |
| Date | | |
| | | Witness |
| | | |
| | | |

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

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 ary 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 | Jie MA |
|--|----------------------|
| Date | Witness |
| Date | Witness |
| | |
| Date Septender 21, 201 | Y: ZHAMA Y: ZHANG |
| Date <u>September</u> 21, 20 Date <u>September</u> 21, 20 | Witness WANG |
| Date <u>September 21, 20</u> | Witness CAO |
| | |

| In re Appln. of Ma et al. Attorney Docket No. | . " |
|---|--|
| Date September 14, 2010 | Jinlin ZILANG |
| Date September 14-2010 | Witness Zhou |
| Date September 14. 2010 | Witness Zhong Witness |
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| Date | Xiaofej MA |
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PATENT REEL: 025147 FRAME: 0672

RECORDED: 10/15/2010