

08-25-2003



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Docket No. 14630

FORM PTO 1595 (Rev. 6-93) OMB No. 0651-0011 (exp. 4/94)	<b>RECORDATION COVER SHEET PATENTS ONLY</b>	U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office
To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.		
1. Name(s) of conveying party(ies): Hebing Wu, Jinlin Zhang, Jiang Li, Qi Ding  Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Name and address of receiving party(ies)  Name: <u>HUAWEI TECHNOLOGIES CO., LTD.</u>  Internal Address: <u>Huawei Service Centre</u>  Street Address: <u>Kefa Road, Science-Based Industrial Park</u>  City: <u>Shen Zhen</u> State: _____ ZIP: <u>518057</u>  Country: <u>China</u>  Additional name(s) & address(es) attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3. Nature of conveyance:  <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger  <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name  <input type="checkbox"/> Other _____  Execution Date: <u>July 24, 2003, July 25, 2003</u>		
4. Application number(s) or patent number(s):  If this document is being filed together with a new application, the execution date of the application is:		
A. Patent Application No.(s) <u>10/434,251</u>	B. Patent No.(s)	
Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Name and address of party to whom correspondence concerning document should be mailed:  Name: <u>Min (Amy) S. Xu</u>  Internal Address: <b>Customer Number 25763</b> <u>Dorsey &amp; Whitney LLP</u> <u>Intellectual Property Department</u> Street Address: <u>Suite 1500, 50 South Sixth Street</u> City: <u>Minneapolis</u> State: <u>MN</u> ZIP <u>55402-1498</u>	6. Total Number of applications and patents involved: <u>1</u>  7. Total fee (37 CFR 3.41)... 1 x \$40. .... <u>40.00</u>  <input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> Authorized to be charged to deposit account  8. Deposit Account number: <u>04-1420</u>  (Attach duplicate copy of this page if paying by deposit account)	
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="font-size: small;">             08/22/2003 DBYRNE 00000052 10434251              01 FC:8021                                      40.00 OP           </div> <div style="border: 1px solid black; padding: 5px;"> <b>DO NOT USE THIS SPACE</b> </div> </div>		
9. 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.  <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="width: 30%;"> <u>Min (Amy) S. Xu</u>            Name of Person Signing            Reg. No. 39,536         </div> <div style="width: 30%; text-align: center;">             Signature         </div> <div style="width: 30%; text-align: center;"> <u>August 18, 2003</u>            Date         </div> </div>		
Total number of pages including cover sheet, attachments, and document: 2		
<b>Mail documents to be recorded with required cover sheet information to:</b>  <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <b>Mail Stop Assignment Recordation Services</b>  <b>Director of the US Patent and Trademark Office</b>  <b>P.O. Box 1450</b>  <b>Alexandria, VA 22313-1450</b> </div> <div style="width: 35%; text-align: right;"> <b>FACSIMILE NO.: 703.306.5995</b> </div> </div>		

PATENT  
REEL: 014411 FRAME: 0092

# ASSIGNMENT

[Entity]

Attorney Docket No.: 14630

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First Named Inventor: Hebing Wu

Title: Method and Apparatus for Down-Link  
Feedback Multiple Antenna Transmission in  
Wireless Communication System

WHEREAS, I, Hebing Wu, residing in Shen Zhen, China 518057, I, Jinlin Zhang, residing in Shen Zhen, China, 518057, I, Jiang Li, residing in Shen Zhen, China 518057, and I Qi Ding, residing in Shen Zhen, China 518057, have invented certain new and useful improvements as described in an application entitled **Method and Apparatus for Down-Link Feedback Multiple Antenna Transmission in Wireless Communication System** for Letters Patent of the United States, being identified as United States Application 10/434,251, filed on May 8, 2003; and

WHEREAS, HUAWEI TECHNOLOGIES CO., LTD., a corporation having offices at Huawei Service Centre Building, Kefa Road, Science-Based Industrial Park, Nanshan District, Shen Zhen China 518057, ("Assignee") is desirous of acquiring the entire right, title and interest in and to the invention, the application, and any and all Letters Patent or similar legal protection, foreign or domestic, to be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I transfer to Assignee, its successors and assigns, my entire right, title, and interest in and to the invention, the above-identified patent application, corresponding domestic applications (including divisionals, continuations, and continuations-in-part), corresponding foreign applications, all Letters Patent or similar legal protection issuing thereon, and all rights and benefits under any applicable treaty or convention; and I authorize the Commissioner of Patents and Trademarks of the United States or foreign equivalent thereof to issue the Letters Patent or similar legal protection to the Assignee.

I authorize the Assignee, its successors and assigns, to insert in this instrument the filing date and application number of the application when ascertained. I authorize the Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent or similar legal protection, in its own name if desired, in any and all foreign countries.

I represent to the Assignee, its successors and assigns, that I have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. I, my executors or administrators, will at any time upon request, without additional consideration, but at the expense of the Assignee, its successors and assigns, execute such additional writings and do such additional acts as the Assignee, its successors and assigns, may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries.

吴和兵 2003.7.25  
Hebing Wu (Date)

张劲林 2003.7.25  
Jinlin Zhang (Date)

李江 2003.7.25  
Jiang Li (Date)

丁齐 03.7.24  
Qi Ding (Date)