

RECORDATION FORM COVER SHEET 17023US01

PATENTS ONLY

To the Director of the U.S. Patents and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies):

1. Jun Zhong
2. Chengjin Zhang
3. Severine Catreux-Erceg
4. Vinko Erceg
5. Pieter Roux
6. Pieter van Rooyen

Execution Date(s) 1. 09/15/2005 2. 09/15/2005

3. 09/18/2005 4. 09/18/2005 5. 09/15/2005 6. 09/16/2005

Additional name of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance/Execution Date(s):

Execution Date(s) _____

- ☒ Assignment ☐ Merger
- ☐ Security Agreement ☐ Change of Name
- ☐ Government Interest Assignment
- ☐ Executive Order 9424, Confirmatory License
- ☐ Other _____

2. Name and address of receiving party(ies)

Name: Broadcom Corporation

Internal Address: _____

Street Address: 16215 Alton ParkwayP.O. Box 57013City: IrvineState: CaliforniaCountry: USAZip: 92619-7013Additional Name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

☐ This document is being filed together with a new application.

A. Patent Application No.(s)

11/231,501

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning this document should be mailed:

Name: McAndrews, Held & Malloy, Ltd.

Internal Address: _____

Street Address: 500 West Madison Street34th FloorCity: ChicagoState: ILZip: 60661Phone Number: (312) 775-8000Fax Number: (312) 775-8100Email Address: mhmpto@mhmlaw.com6. Total number of applications and patents involved: 17. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

- ☐ Authorized to be charged by credit card
- ☒ Authorized to be charged to deposit account
- ☐ Enclosed
- ☐ None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers _____
Expiration Date _____b. Deposit Account Number 13-0017Authorized User Name McAndrews Held & Malloy, Ltd.

9. Signature:

Signature

Ognyan I. Beremski Reg. No. 51,458

Name of Person Signing

19-Oct-05

Date

Total number of pages
sheet, attachments, and documents8Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

PATENT

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REEL: 016912 FRAME: 0122

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ASSIGNMENT

File No.: 17023US01

Serial No.: 11/231,501

Inventors: Jun Zheng
Chengjin Zhang
Severine Catreux-Erceg
Vinko Erceg
Pieter Roux
Pieter Van Rooyen

Filing Date: September 21, 2005

In consideration of One Dollar (\$1.00) and other good and valuable considerations in hand paid, the receipt and sufficiency whereof are hereby acknowledged, each of the undersigned hereby assigns to Broadcom Corporation, incorporated under the laws of the state of California, its successors and assigns, the entire right, title and interest in the invention or improvements of the undersigned disclosed in an application for Letters Patent of the United States, entitled: "A DOUBLE SEARCH ALGORITHM OF USER GROUP SELECTION FOR MULTIUSER MIMO DOWNLINK TRANSMISSION" and identified as File No. 17023US01, in the offices of McANDREWS, HELD & MALLOY, LTD., and in said application and any and all other applications, both United States and foreign, which the undersigned may file, either solely or jointly with others, on said invention or improvements, and in any and all Letters Patent of the United States and foreign countries, which may be obtained on any of said applications, and in any continuation, continuation-in-part, divisional, re-examination, reissue or extension of such patents, and further assigns to said assignee the priority right provided by the International Convention.

Each of the undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to said assignee.

Each of the undersigned hereby authorizes and requests the attorneys of record in said application to insert in this assignment the filing date and serial number of said application when officially known.

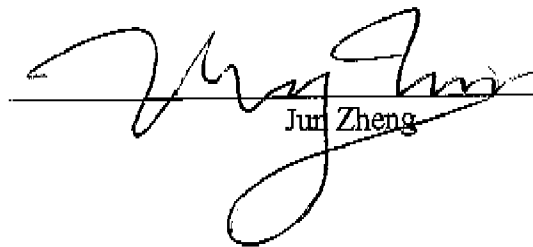
Each of the undersigned warrants himself/herself to be the owner of the entire right, title and interest in said invention or improvements and to have the right to make this assignment, and further warrants that there are no outstanding prior assignments, licenses, or other encumbrances on the interest herein assigned.

For said considerations, each of the undersigned hereby agrees, upon the request and at the expense of said assignee, its successors and assigns, to execute any and all continuation, continuation-in-part, divisional, re-examination, extension, and substitute applications for said invention or improvements, and any necessary oath, affidavit or declaration relating thereto, and any application for the reissue, re-examination, or extension of any Letters Patent that may be granted upon said application, and any and all applications and other document for Letters Patent in foreign countries on said invention or improvements, that said assignee, its successors or assigns may deem necessary or expedient, and for the said considerations each of the undersigned authorizes said assignee to apply for patents for said invention or improvements in its own name in such countries where such procedure is proper and further agrees, upon the request of said

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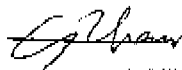
assignee, its successors and assigns, to cooperate to the best of the ability of the undersigned with said assignee, its successors and assigns, in any proceedings or transactions involving such applications or patents, including the preparation and execution of preliminary statements, giving and producing evidence and performing any and all other acts necessary to obtain said Letters Patent, both United States and foreign, and vest all rights therein hereby conveyed in the assignee, its successors and assigns, whereby said Letters Patent will be held and enjoyed by the said assignee, its successors and assigns, to the full end of the term for which said Letters Patent will be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

WITNESS my hand this 15th day of September, 2005.



Jun Zheng

WITNESS my hand this 15th day of September, 2005.



Chengjin Zhang

WITNESS my hand this 18th day of September, 2005.


Severine Catreux-Erceg

WTNESS my hand this 18 day of September, 2005.



Vinko Erceg

WTNESS my hand this 15 day of September, 2005.

A handwritten signature in dark ink, appearing to read 'Pieter Roux', is written over a horizontal line.

Pieter Roux

AT ORNEY PATENT NO. 17023US01 (BU 4988)

WITNESS my hand this 16 day of September, 2005.


Pieter Van Rooyen