

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>Jay R. Walton</td><td>09/03/2002</td></tr><tr><td>John W. Ketchum</td><td>09/03/2002</td></tr></tbody></table>   |                       | Name          | Execution Date        | Jay R. Walton       | 09/03/2002           | John W. Ketchum | 09/03/2002 |                |            |              |       |
| Name  | Execution Date        |               |                       |                     |                      |                 |            |                |            |              |       |
| Jay R. Walton   | 09/03/2002            |               |                       |                     |                      |                 |            |                |            |              |       |
| John W. Ketchum   | 09/03/2002            |               |                       |                     |                      |                 |            |                |            |              |       |
| RECEIVING PARTY DATA  |                       |               |                       |                     |                      |                 |            |                |            |              |       |
| <table border="1"><tr><td>Name:</td><td>Qualcomm Incorporated</td></tr><tr><td>Street Address:</td><td>5775 Morehouse Drive</td></tr><tr><td>City:</td><td>San Diego</td></tr><tr><td>State/Country:</td><td>CALIFORNIA</td></tr><tr><td>Postal Code:</td><td>92121</td></tr></table> |                       | Name:         | Qualcomm Incorporated | Street Address:     | 5775 Morehouse Drive | City:           | San Diego  | State/Country: | CALIFORNIA | Postal Code: | 92121 |
| Name:   | Qualcomm Incorporated |               |                       |                     |                      |                 |            |                |            |              |       |
| Street Address:   | 5775 Morehouse Drive  |               |                       |                     |                      |                 |            |                |            |              |       |
| City:   | San Diego             |               |                       |                     |                      |                 |            |                |            |              |       |
| State/Country:  | CALIFORNIA            |               |                       |                     |                      |                 |            |                |            |              |       |
| Postal Code:  | 92121                 |               |                       |                     |                      |                 |            |                |            |              |       |
| 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>11401758</td></tr></tbody></table>  |                       | Property Type | Number                | Application Number: | 11401758             |                 |            |                |            |              |       |
| Property Type   | Number                |               |                       |                     |                      |                 |            |                |            |              |       |
| Application Number:   | 11401758              |               |                       |                     |                      |                 |            |                |            |              |       |
| CORRESPONDENCE DATA   |                       |               |                       |                     |                      |                 |            |                |            |              |       |
| Fax Number: (858)658-2502<br><i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>   |                       |               |                       |                     |                      |                 |            |                |            |              |       |
| Phone: 8586585568   |                       |               |                       |                     |                      |                 |            |                |            |              |       |
| Email: llawlor@qualcomm.com   |                       |               |                       |                     |                      |                 |            |                |            |              |       |
| Correspondent Name: Qualcomm Incorporated   |                       |               |                       |                     |                      |                 |            |                |            |              |       |
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| ATTORNEY DOCKET NUMBER:   | 020429C1              |               |                       |                     |                      |                 |            |                |            |              |       |
| NAME OF SUBMITTER:  | Leeanne Lawlor        |               |                       |                     |                      |                 |            |                |            |              |       |
| Total Attachments: 2<br>source=020429C1_Assignment#page1.tif<br>source=020429C1_Assignment#page2.tif  |                       |               |                       |                     |                      |                 |            |                |            |              |       |

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REEL: 025015 FRAME: 0676

## ASSIGNMENT

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TO WHOM IT MAY CONCERN:

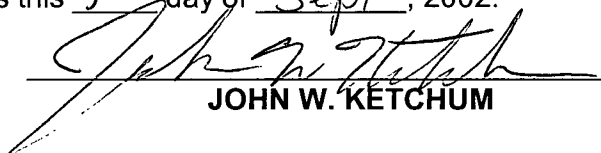
For the sum of One Dollar and other valuable consideration to us in hand paid, receipt of which is hereby acknowledged, be it known that we **JAY R. WALTON**, a citizen of the United States of America having a place of residence at **85 HIGHWOODS LANE, CARLISLE, MASSACHUSETTS 01741**; and **JOHN W. KETCHUM**, a citizen of the United States of America having a place of residence at **37 CANDLEBERRY LANE, HARVARD, MASSACHUSETTS 01451**; have sold, assigned and transferred and by these presents do sell, assign, transfer and set over unto **QUALCOMM Incorporated**, a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, its successors, legal representatives, or assigns, the whole right, title and interest in and to a certain invention relating to a **DIVERSITY TRANSMISSION MODES FOR MIMO OFDM COMMUNICATION SYSTEMS** by us devised and the application for United States Patent therefor filed in the United States Patent and Trademark Office on **06/24/2002**, and assigned Application Serial No. **10/179,439**, and all original and reissue patents granted thereof, and all divisions, and continuations thereof, including the subject matter of any and all claims which may be obtained in every such patent, and all foreign rights to said invention, and covenant that we have full right to do so, and agree that we will communicate to said corporation or its representatives all facts known to us respecting said invention, whenever requested, and testify in any legal proceedings, sign all lawful papers, make all rightful oaths and generally do everything possible to aid said corporation, its successors, assigns and nominees, to obtain and enforce proper patent protection for said invention in all countries.

The Commissioner of Patents and Trademarks is requested to issue the Letters Patent which may be granted for said invention or any part thereof unto said corporation in keeping with this Assignment.

Done at Carlisle, Massachusetts this 3 day of Sept., 2002.

  
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JAY R. WALTON c

Done at Harvard, Massachusetts this 3<sup>rd</sup> day of Sept., 2002.

  
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JOHN W. KETCHUM