PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Tao Luo	04/04/2009
Juan Montojo	04/04/2009
Peter Gaal	04/06/2009
Sandip Sarkar	04/15/2009

RECEIVING PARTY DATA

Name:	QUALCOMM Incorporated	
Street Address:	5775 Morehouse Drive	
City:	San Diego	
State/Country:	CALIFORNIA	
Postal Code:	92121	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	12409963	

CORRESPONDENCE DATA

Fax Number: (858)658-2502

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

Email: us-docketing@qualcomm.com
Correspondent Name: QUALCOMM Incorporated
Address Line 1: 5775 Morehouse Drive

Address Line 4: San Diego, CALIFORNIA 92121

ATTORNEY DOCKET NUMBER:	081079
NAME OF SUBMITTER:	Gayle Gestick

Total Attachments: 4

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PATENT REEL: 022808 FRAME: 0972

ASSIGNMENT

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,

- 1. Tao Luo, a citizen of Canada, having a place of residence at 11002 West Ocean Air Drive #2121, San Diego, California, 92130, United States of America;
- Juan Montojo, a citizen of the United States of America, having a place of residence at 5724 Ginger Glen Trail, San Diego, California, 92130, United States of America;
- Peter Gaal, a citizen of the United States of America, having a place of residence at 8304
 Menkar Road, San Diego, California, 92126, United States of America; and
- 4. Sandip Sarkar, a citizen of the United States of America, having a place of residence at 11445 Wild Meadow Place, San Diego, California, 92131, United States of America;

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 entire right, title and interest in and to a certain invention relating to TRANSMISSION AND RECEPTION OF DEDICATED REFERENCE SIGNALS by us devised and the application for United States Patent therefore filed in the United States Patent and Trademark Office on March 24, 2009, assigned Application Number 12/409,963, including, without limitation, all provisional patent applications, including Provisional Application Number 61/039,412 filed on March 25, 2008, and all original and reissue patents granted thereof (in the United States and any foreign country), 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.

Page 1 of 2

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 San Diego, Californía this 4 day of 2001, 2009.				
	Tao Luo			
Done at San Diego, California this	day of <u>Agrad</u> , 2009.			
	Juan Montojo			
Done at San Diego, California this	ay of <u>@ ⊘ √ </u> , 2009.			
	Peter Gaal			
Done at San Diego, California this	day of, 2009.			
	Sandin Sarkar			

ASSIGNMENT

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,

- 1. Tao Luo, a citizen of Canada, having a place of residence at 11002 West Ocean Air Drive #2121, San Diego, California, 92130, United States of America;
- Juan Montojo, a citizen of the United States of America, having a place of residence at 2. 5724 Ginger Glen Trail, San Diego, California, 92130, United States of America;
- 3. Peter Gaal, a citizen of the United States of America, having a place of residence at 8304 Menkar Road, San Diego, California, 92126, United States of America; and
- Sandip Sarkar, a citizen of the United States of America, having a place of residence at 11445 Wild Meadow Place, San Diego, California, 92131, United States of America;

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 entire right, title and interest in and to a certain invention relating to TRANSMISSION AND RECEPTION OF DEDICATED REFERENCE SIGNALS by $_{
m us}$ devised and the application for United States Patent therefore filed in the United States Patent and Trademark Office on March 24, 2009, assigned Application Number 12/409,963, including. without limitation, all provisional patent applications, including Provisional Application Number 61/039,412 filed on March 25, 2008, and all original and reissue patents granted thereof (in the United States and any foreign country), 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 eaths 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.

> PATENT REEL: 022808 FRAME: 0975

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 San Diego, California this	day of	, 2009.
	Tao Luo	
Done at San Diego, California this	day of	_, 2009.
. saesa	Juan Montojo	
	40. A	
Done at San Diego, California this	day of	_, 2009.
	$\mathcal{S} = \mathcal{S}_{\mathcal{A}} = \mathcal{A}_{\mathcal{A}} = \mathcal{A}_{\mathcal{A}}$	
	Peter Gaal	
Done at San Diego, California this <u>S</u>	day of \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	2009.
	Sandip Sarkar	

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PATENT REEL: 022808 FRAME: 0976