PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Peter Gaal	10/28/2009
Brian C. Banister	11/16/2009
Brian K. Butler	11/03/2009

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:	12576932

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: 071696

NAME OF SUBMITTER: Gayle Gestick

Total Attachments: 6

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PATENT Docket No.071696 Page 1 of 2

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. Peter Gaal, a citizen of the United States of America, having a mailing address of 5775

Morehouse Drive, San Diego, California, 92121, United States of America; and a resident of San

Diego, California, United States of America,

2. Brian C. Banister, a citizen of the United States of America, having a mailing address of

5775 Morehouse Drive, San Diego, California, 92121, United States of America; and a resident

of San Diego, California, United States of America,

3. Brian K. Butler, a citizen of the United States of America, having a mailing address of

1178 Virginia Way, La Jolla, California, 92037, United States of America; and a resident of La

Jolla, California, 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 TIME

ORTHOGONALIZATION OF REFERENCE SIGNALS by us devised and the application

for United States Patent therefore filed in the United States Patent and Trademark Office on

October 9, 2009, and assigned Serial No. 12/576,932, including, without limitation, all

provisional patent applications, and all original and reissue patents granted thereof (in the

PATENT

REEL: 023682 FRAME: 0589

ASSIGNMENT

United States and any foreign country), and all divisionals, continuations and continuations-inpart 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 San Diego, California this 🕮	_day of <u></u>	<u>ं राजीक</u> , 2009.	
	<		
		Peter Gaal	
Done at San Diego, California this	day of _		
	***************************************	Brian C. Banister	
Done at La Jolla, California this da	ay of	, 2009.	
		Brian K. Butler	

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Done at San Diego, California this day of	of, 2009.
	Peter Gaal
Done at San Diego, California this _/& day o	of <u>Nov.</u> , 2009.
	L: 0/m5
	Brjan C. Banister
Done at La Jolla, California this day of _	, 2009.
	Brian K. Butler

PATENT Docket No.071696 Page 1 of 2

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REEL: 023682 FRAME: 0593

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Done at San Diego, California this	day of, 2009.	
	Brian C. Banister	
Done at La Jolla, California this 🗾 da	ay of <u>Modes</u> , 2009.	
	Brian K. Butler	****

RECORDED: 12/21/2009