502333297 05/02/2013

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Xiangdong ZHANG	04/10/2013
Jay Rodney WALTON	04/10/2013
Mark S. WALLACE	04/10/2013
Puay Hoe SEE	04/25/2013

RECEIVING PARTY DATA

Name:	QUALCOMM Incorporated	
Street Address:	5775 Morehouse Drive	
City:	San Diego	
State/Country:	CALIFORNIA	
Postal Code:	92121-1714	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	13791519	

CORRESPONDENCE DATA

Fax Number: 8586582502

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

Phone: (858) 651-5205

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

Address Line 4: San Diego, CALIFORNIA 92121-1714

	PATENT
Signature:	/Michelle Sanfilippo/
NAME OF SUBMITTER:	Michelle Sanfilippo
ATTORNEY DOCKET NUMBER:	121626

REEL: 030338 FRAME: 0221

0.00 13791519

502333297

Date:	05/02/2013	
Total Attachments: 6 source=121626_Assignment_Signed#page1.tif source=121626_Assignment_Signed#page2.tif source=121626_Assignment_Signed#page3.tif source=121626_Assignment_Signed#page4.tif source=121626_Assignment_Signed#page5.tif source=121626_Assignment_Signed#page6.tif		

ASSIGNMENT

WHEREAS, WE,

- 1. Xiangdong ZHANG, a citizen of United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121 and a resident of Westford, Massachusetts,
- 2. **Jay Rodney WALTON**, a citizen of United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121 and a resident of Carlisle, Massachusetts,
- 3. Mark S. WALLACE, a citizen of United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121 and a resident of Boxborough, Massachusetts,
- 4. **Puay Hoe SEE**, a citizen of United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121 and a resident of San Diego, California,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **METHOD AND APPARATUS FOR ANTENNA TUNING AND TRANSMIT PATH SELECTION** (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, QUALCOMM Incorporated (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). 13/791,519 filed March 8, 2013, Qualcomm Reference No. 121626, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 61/654,550, filed June 1, 2012, Qualcomm Reference No. 121626P1, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have

granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY represent that WE have full and exclusive, unencumbered right to sell, assign, convey and transfer all subject matter herein, and hereby covenant that WE have not and will not execute any writing or do any act whatsoever conflicting with these presents.

PATENT QUALCOMM Ref. No. 121626 Page 3 of 3

Done at $\mathcal{B}_{o imes}$	manual, on	410/2013 DATE	
LO	CATION/	DATE	Xiangdong ZHANG
Done at <u>Bodo</u> LO	coush MA, on CATION	4/10/2»/3 DATE	Jay Rodney WALTON
Done at <u>Aף</u> , LO	cation	4/10/2013 DATE	Mark S. WALLACE
Done at	on,	DATE	Puav Hoe SEE

ASSIGNMENT

WHEREAS, WE,

- 1. Xiangdong ZHANG, a citizen of United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121 and a resident of Westford, Massachusetts,
- 2. Jay Rodney WALTON, a citizen of United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121 and a resident of Carlisle, Massachusetts,
- 3. Mark S. WALLACE, a citizen of United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121 and a resident of Boxborough, Massachusetts,
- 4. **Puay Hoe SEE**, a citizen of United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121 and a resident of San Diego, California,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to METHOD AND APPARATUS FOR ANTENNA TUNING AND TRANSMIT PATH SELECTION (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, QUALCOMM Incorporated (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). 13/791,519 filed March 8, 2013, Qualcomm Reference No. 121626, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 61/654,550, filed June 1, 2012, Qualcomm Reference No. 121626P1, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have

granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY represent that WE have full and exclusive, unencumbered right to sell, assign, convey and transfer all subject matter herein, and hereby covenant that WE have not and will not execute any writing or do any act whatsoever conflicting with these presents.

PATENT
QUALCOMM Ref. No. 121626
Page 3 of 3

Done at		, on		
	LOCATION		DATE	Xiaugdong ZHANG
Done at		, on _		
	LOCATION		DATE	Jay Rodney WALTON
Done at		, on		
	LOCATION	·····	DATE	Mark S. WALLACE
Done at	San Diepo	, on	4125/2013	Luzz Co
	LOCATION		DATE	Puay Hoe SEE

PATENT REEL: 030338 FRAME: 0228

RECORDED: 05/02/2013