## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2802662

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

## **CONVEYING PARTY DATA**

Name	Execution Date
QIANG WU	03/27/2014
WANLUN ZHAO	10/25/2013
PETER JOHN BLACK	03/26/2014

## **RECEIVING PARTY DATA**

Name:	QUALCOMM Incorporated	
Street Address:	5775 Morehouse Drive	
Internal Address:	Patent Department/Central Administration	
City:	San Diego	
State/Country:	CALIFORNIA	
Postal Code:	92121	

## **PROPERTY NUMBERS Total: 7**

Property Type	Number
Application Number:	13944495
Application Number:	12113903
Application Number:	60939035
Application Number:	60978068
Application Number:	61014706
Application Number:	61038660
Application Number:	61016101

## **CORRESPONDENCE DATA**

**Fax Number:** (858)658-2502

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via

US Mail.

**Phone:** 858-845-4265

Email:us-docketing@qualcomm.comCorrespondent Name:QUALCOMM INCORPORATED

Address Line 1: 5775 MOREHOUSE DR.

Address Line 4: SAN DIEGO, CALIFORNIA 92121

ATTORNEY DOCKET NUMBER: 080475D1

NAME OF SUBMITTER: JOSEPH SALAZAR

502756066 REEL: 032615 FRAME: 0118

<del>- PATENT -</del>

SIGNATURE:	/JOSEPH SALAZAR/	
DATE SIGNED:	04/07/2014	
Total Attachments: 9		
source=080475D1_2014_04_01_Assignment#page1.tif		
source=080475D1_2014_04_01_Assignment#page2.tif		
source=080475D1_2014_04_01_Assignment#page3.tif		
source=080475D1_2014_04_01_Assignment#page4.tif		
source=080475D1_2014_04_01_Assignment#page5.tif		
source=080475D1_2014_04_01_Assignment#page6.tif		
source=080475D1_2014_04_01_Assignment#page7.tif		
source=080475D1_2014_04_01_Assignment#page8.tif		
source=080475D1_2014_04_01_Assignment#page9.tif		

## ASSIGNMENT

## WHEREAS, WE,

- 1. Qiang Wu, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121, and a resident of San Diego, CA,
- 2. Wanlun Zhao, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121, and a resident of San Diego, CA,
- 3. Peter John Black, a citizen of Australia, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121, and a resident of San Diego, CA,

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 ENHANCED PILOT SIGNAL RECEIVER (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). 13/944,495 filed July 17, 2013, Qualcomm Reference No. 080475D1, and all provisional applications relating thereto, together with U.S. Application No(s). 12/113,903, filed May 1, 2008, Qualcomm Reference No. 080475, together with U.S. Provisional Application No(s). 60/939,035, filed May 18, 2007, Qualcomm Reference No. 071317P1, together with U.S. Provisional Application No(s), 60/978,068, filed October 5, 2007, Qualcomm Reference No. 071317P2, together with U.S. Provisional Application No(s), 61/014,706, filed December 18, 2007, Qualcomm Reference No. 071317P3, together with U.S. Provisional Application No(s). 61/038,660, filed March 21, 2008, Qualcomm Reference No. 071317P4, together with U.S. Provisional Application No(s). 61/016,101, filed December 21, 2007, Qualcomm Reference No. 080425P1, (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;

QUALCOMM Ref. No. 080475D1 Page 3 of 3

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.

Done at	ian Diego	, on <u>03/27/2014</u>	Queigr-	
	LOCATION	DATE	Qiang Wu	-
Done at _	LOCATION	, on DATE	Wanlun Zhao	
Done at _	LOCATION	_, on	Peter John Black	

## **ASSIGNMENT**

WHEREAS, WE,

- 1. Qiang Wu, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121, and a resident of San Diego, CA,
- 2. **Wanlun Zhao,** a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121, and a resident of San Diego, CA,
- 3. **Peter John Black,** a citizen of Australia, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121, and a resident of San Diego, CA,

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 ENHANCED PILOT SIGNAL RECEIVER (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). 13/944,495 filed July 17, 2013, Qualcomm Reference No. 080475D1, and all provisional applications relating thereto, together with U.S. Application No(s). 12/113,903, filed May 1, 2008, Qualcomm Reference No. 080475, together with U.S. Provisional Application No(s). 60/939,035, filed May 18, 2007, Qualcomm Reference No. 071317P1, together with U.S. Provisional Application No(s). 60/978,068, filed October 5, 2007, Qualcomm Reference No. 071317P2, together with U.S. Provisional Application No(s). 61/014,706, filed December 18, 2007, Qualcomm Reference No. 071317P3, together with U.S. Provisional Application No(s), 61/038,660, filed March 21, 2008, Qualcomm Reference No. 071317P4, together with U.S. Provisional Application No(s). 61/016,101, filed December 21, 2007, Qualcomm Reference No. 080425P1, (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.

Done at	, on		
-	LOCATION	DATE	Qiang Wu
Done at	CALOCATION	/0/25/2005 DATE	Wanlun Zhao
Done at _	, on		
	LOCATION	DATE	Peter John Black

## ASSIGNMENT

## WHEREAS, WE,

- 1. **Qiang Wu,** a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121, and a resident of San Diego, CA,
- 2. **Wanlun Zhao**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121, and a resident of San Diego, CA,
- 3. **Peter John Black**, a citizen of Australia, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121, and a resident of San Diego, CA,

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 **ENHANCED PILOT SIGNAL RECEIVER** (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). 13/944,495 filed July 17, 2013, Qualcomm Reference No. 080475D1, and all provisional applications relating thereto, together with U.S. Application No(s). 12/113,903, filed May 1, 2008, Qualcomm Reference No. 080475. together with U.S. Provisional Application No(s). 60/939,035, filed May 18, 2007, Qualcomm Reference No. 071317P1, together with U.S. Provisional Application No(s). 60/978.068, filed October 5, 2007, Qualcomm Reference No. 071317P2, together with U.S. Provisional Application No(s). 61/014,706, filed December 18, 2007, Qualcomm Reference No. 071317P3. together with U.S. Provisional Application No(s). 61/038,660, filed March 21, 2008, Qualcomm Reference No. 071317P4, together with U.S. Provisional Application No(s). 61/016,101, filed December 21, 2007, Qualcomm Reference No. 080425P1, (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;

# PATENT QUALCOMM Ref. No. 080475D1 Page 3 of 3

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.

Done at	, on	
LOCATION	DATE	Qiang Wu
Done atLOCATION	on	Wanlun Zhao
Done at Do Diejo	_, on 3/26/14	JAn ) Block
LOCATION	DATE	Peter John Black

PATENT REEL: 032615 FRAME: 0128

RECORDED: 04/07/2014