PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2639036

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RAHUL GOPALAN	10/08/2013
HYUKJUNE CHUNG	10/02/2013
PRASANJIT PANDA	10/03/2013

RECEIVING PARTY DATA

Name:	QUALCOMM INCORPORATED
Street Address:	5775 MOREHOUSE DRIVE
City:	SAN DIEGO
State/Country:	CALIFORNIA
Postal Code:	92121-1714

PROPERTY NUMBERS Total: 3

Property Type	Number
Application Number:	13973907
Application Number:	61693469
Application Number:	61814720

CORRESPONDENCE DATA

 Fax Number:
 (949)760-9502

 Phone:
 8587074000

Email: anna.martin@knobbe.com

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

Correspondent Name: KNOBBE MARTENS OLSON & BEAR, LLP

Address Line 1: 2040 MAIN STREET Address Line 2: 14TH FLOOR

Address Line 4: IRVINE, CALIFORNIA 92614

ATTORNEY DOCKET NUMBER:	QVID.070A6
NAME OF SUBMITTER:	ERIC NELSON PATENT

502592819 REEL: 031726 FRAME: 0842

\$120,00 13973907

Signature:	/Eric Nelson/	
Date:	12/05/2013	
Total Attachments: 9		
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ASSIGNMENT

WHEREAS, WE,

- Rahul Gopalan, a citizen of India, having a mailing address located at 695 Tasman Dr., Unit 3220, Sunnyvale, CA 94089 and a resident of Sunnyvale, CA;
- Hyukjune Chung, a citizen of Korea, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 and a resident of San Diego, CA; and
- Prasanjit Panda, a citizen of the United States, 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 DEVICE AND **METHOD** FOR ADAPTIVE RATE MULTIMEDIA COMMUNICATIONS ON A WIRELESS NETWORK (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). 13/973,907 filed August 22, 2013, Qualcomm Reference No. 123109U6, and all provisional applications relating thereto, together with U.S. Provisional Application No. 61/693,469, filed August 27, 2012, Qualcomm Reference No. 123109P1 and U.S. Provisional Application No. 61/814,720, filed April 22, 2013, Qualcomm Reference No. 123109P2 (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. QVID.070A6/123109U6 Page 3 of 3

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at	CA, CA, UHITED STATES	10/08/2013	Ah.
Done at_	LOCATION	on	Rahul Gopalan
Done at_	LOCATION	on	Hyukjune Chung
Done at _	LOCATION	on	Prasanjit Panda

ASSIGNMENT

WHEREAS, WE,

- 1. Rahul Gopalan, a citizen of India, having a mailing address located at 695 Tasman Dr., Unit 3220, Sunnyvale, CA 94089 and a resident of Sunnyvale, CA;
- 2. **Hyukjune Chung,** a citizen of Korea, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 and a resident of San Diego, CA; and
- 3. Prasanjit Panda, a citizen of the United States, 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 DEVICE AND METHOD FOR ADAPTIVE RATE MULTIMEDIA COMMUNICATIONS ON A WIRELESS NETWORK (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). 13/973,907 filed August 22, 2013, Qualcomm Reference No. 123109U6, and all provisional applications relating thereto, together with U.S. Provisional Application No. 61/693,469, filed August 27, 2012, Qualcomm Reference No. 123109P1 and U.S. Provisional Application No. 61/814,720, filed April 22, 2013, Qualcomm Reference No. 123109P2 (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. QVID.070A6/123109U6 Page 3 of 3

whatsoever conflicting with these presents.			
Done at	ocation , on	DATE	Rahul Gopalan
Done at San	Diejo (A, on OCATION	(0/2/2013 DATE	Che Hyukjune Chang
Done at	on , on	DATE	Prasanjit Panda

AND WE HEREBY covenant that WE will not execute any writing or do any act

ASSIGNMENT

WHEREAS, WE,

- 1. Rahul Gopalan, a citizen of India, having a mailing address located at 695 Tasman Dr., Unit 3220, Sunnyvale, CA 94089 and a resident of Sunnyvale, CA;
- 2. **Hyukjune Chung,** a citizen of Korea, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 and a resident of San Diego, CA; and
- 3. **Prasanjit Panda**, a citizen of the United States, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 and a resident of San Diego, CA,

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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). 13/973,907 filed August 22, 2013, Qualcomm Reference No. 123109U6, and all provisional applications relating thereto, together with U.S. Provisional Application No. 61/693,469, filed August 27, 2012, Qualcomm Reference No. 123109P1 and U.S. Provisional Application No. 61/814,720, filed April 22, 2013, Qualcomm Reference No. 123109P2 (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;

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QUALCOMM Ref. No. QVID.070A6/123109U6

Page 3 of 3

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at		, on		
	LOCATION		DATE	Rahul Gopalan
Done at	LOCATION	_, on _	DATE	Hyukjune Chung
Done at	SAW DIEGO, CA	_, on	10(02/2013 DATE	Prasanjit Panda

> PATENT REEL: 031726 FRAME: 0852

RECORDED: 12/05/2013