

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6804362

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the SPELLING OF INVENTOR #7 ALEXI YURIEVITCH GOROKHOV AND CORRECTING THE EXECUTION DATE OF 07/03/2018 previously recorded on Reel 052946 Frame 0532. Assignor(s) hereby confirms the SPELLING OF INVENTOR #7 IS ALEXEI YURIEVITCH GOROKHOV AND THE CORRECT DATE IS 05/20/2021.
<b>RESUBMIT DOCUMENT ID:</b>	506694787

**CONVEYING PARTY DATA**

Name	Execution Date
TIANYANG BAI	07/10/2018
MUHAMMAD NAZMUL ISLAM	06/28/2018
JUERGEN CEZANNE	06/28/2018
SUNDAR SUBRAMANIAN	07/12/2018
RUHUA HE	07/20/2018
RAGHU NARAYAN CHALLA	08/03/2018
ALEXEI YURIEVITCH GOROKHOV	05/20/2021
JUNYI LI	07/02/2018

**RECEIVING PARTY DATA**

<b>Name:</b>	QUALCOMM INCORPORATED
<b>Street Address:</b>	5775 MOREHOUSE DRIVE
<b>City:</b>	SAN DIEGO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	92121

**PROPERTY NUMBERS Total: 1**

Property Type	Number
<b>Application Number:</b>	16902132

**CORRESPONDENCE DATA****Fax Number:**

*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*

**Email:** csingleton@pattersonsheridan.com**Correspondent Name:** ORSON J. BELL**Address Line 1:** 24 GREENWAY PLAZA**Address Line 2:** SUITE 1600**Address Line 4:** HOUSTON, TEXAS 77046

<b>ATTORNEY DOCKET NUMBER:</b>	QUAL/174854USC01
<b>NAME OF SUBMITTER:</b>	ORSON J. BELL
<b>SIGNATURE:</b>	/Orson J. Bell/
<b>DATE SIGNED:</b>	07/09/2021

**Total Attachments: 12**

source=174854USC01\_Assignment Cover Sheet and Assignment#page1.tif  
source=174854USC01\_Assignment Cover Sheet and Assignment#page2.tif  
source=174854USC01\_Assignment Cover Sheet and Assignment#page3.tif  
source=174854USC01\_Assignment Cover Sheet and Assignment#page4.tif  
source=174854USC01\_Assignment Cover Sheet and Assignment#page5.tif  
source=174854USC01\_Assignment Cover Sheet and Assignment#page6.tif  
source=174854USC01\_Assignment Cover Sheet and Assignment#page7.tif  
source=174854USC01\_Assignment Cover Sheet and Assignment#page8.tif  
source=174854USC01\_Assignment Cover Sheet and Assignment#page9.tif  
source=174854USC01\_Assignment Cover Sheet and Assignment#page10.tif  
source=174854USC01\_Assignment Cover Sheet and Assignment#page11.tif  
source=174854USC01\_Assignment Cover Sheet and Assignment#page12.tif



United States Patent and Trademark Office

[Home](#) | [Site Index](#) | [Search](#) | [Guides](#) | [Contacts](#) | [eBusiness](#) | [eSiz alerts](#) | [News](#) | [Help](#)**Electronic Patent Assignment System****Confirmation Receipt**

Your assignment has been received by the USPTO.  
The coversheet of the assignment is displayed below:

**PATENT ASSIGNMENT COVER SHEET**

Electronic Version v1.1  
Stylesheet Version v1.2

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT																		
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT																		
Correction to the first name of Inventor 7 from Alexi to Alexei																			
<b>CONVEYING PARTY DATA</b>																			
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>TIANYANG BAI</td> <td>07/10/2018</td> </tr> <tr> <td>MUHAMMAD NAZMUL ISLAM</td> <td>06/28/2018</td> </tr> <tr> <td>JUERGEN CEZANNE</td> <td>06/28/2018</td> </tr> <tr> <td>SUNDAR SUBRAMANIAN</td> <td>07/12/2018</td> </tr> <tr> <td>RUHUA HE</td> <td>07/20/2018</td> </tr> <tr> <td>RAGHU NARAYAN CHALLA</td> <td>08/03/2018</td> </tr> <tr> <td>ALEXI YURIEVITCH GOROKHOV ALEXEI YURIEVITCH GOROKHOV</td> <td><del>07/03/2018</del> 05/20/2021</td> </tr> <tr> <td>JUNYI LI</td> <td>07/02/2018</td> </tr> </tbody> </table>		Name	Execution Date	TIANYANG BAI	07/10/2018	MUHAMMAD NAZMUL ISLAM	06/28/2018	JUERGEN CEZANNE	06/28/2018	SUNDAR SUBRAMANIAN	07/12/2018	RUHUA HE	07/20/2018	RAGHU NARAYAN CHALLA	08/03/2018	ALEXI YURIEVITCH GOROKHOV ALEXEI YURIEVITCH GOROKHOV	<del>07/03/2018</del> 05/20/2021	JUNYI LI	07/02/2018
Name	Execution Date																		
TIANYANG BAI	07/10/2018																		
MUHAMMAD NAZMUL ISLAM	06/28/2018																		
JUERGEN CEZANNE	06/28/2018																		
SUNDAR SUBRAMANIAN	07/12/2018																		
RUHUA HE	07/20/2018																		
RAGHU NARAYAN CHALLA	08/03/2018																		
ALEXI YURIEVITCH GOROKHOV ALEXEI YURIEVITCH GOROKHOV	<del>07/03/2018</del> 05/20/2021																		
JUNYI LI	07/02/2018																		
<b>RECEIVING PARTY DATA</b>																			
<b>Name:</b>	QUALCOMM INCORPORATED																		
<b>Street Address:</b>	5775 MOREHOUSE DRIVE																		
<b>City:</b>	SAN DIEGO																		
<b>State/Country:</b>	CALIFORNIA																		
<b>Postal Code:</b>	92121-1714																		
<b>PROPERTY NUMBERS Total: 1</b>																			
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td><b>Application Number:</b></td> <td>16902132</td> </tr> </tbody> </table>		Property Type	Number	<b>Application Number:</b>	16902132														
Property Type	Number																		
<b>Application Number:</b>	16902132																		

**CORRESPONDENCE DATA**

**Fax Number:** (713)623-4846  
**Phone:** (713) 623-4844  
**Email:** mmiles@pattersonsheridan.com,psdocketing@pattersonsheridan.com  
*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*  
**Correspondent Name:** PATTERSON & SHERIDAN, LLP  
**Address Line 1:** 24 GREENWAY PLAZA, SUITE 1600  
**Address Line 4:** HOUSTON, TEXAS 77046

<b>ATTORNEY DOCKET NUMBER:</b>	174854USC01
<b>NAME OF SUBMITTER:</b>	ORSON J. BELL
<b>Signature:</b>	/Orson J. BELL/
<b>Date:</b>	06/16/2020
<b>Total Attachments: 8</b> source=174854C1_Assignment#page1.tif source=174854C1_Assignment#page2.tif source=174854C1_Assignment#page3.tif source=174854C1_Assignment#page4.tif source=174854C1_Assignment#page5.tif source=174854C1_Assignment#page6.tif source=174854C1_Assignment#page7.tif source=174854C1_Assignment#page8.tif	
<b>RECEIPT INFORMATION</b>  <b>EPAS ID:</b> PAT6154786 <b>Receipt Date:</b> 06/16/2020	

[Return to home page](#)

| [HOME](#) | [INDEX](#) | [SEARCH](#) | [eBUSINESS](#) | [CONTACT US](#) | [PRIVACY STATEMENT](#)

**ASSIGNMENT**

WHEREAS, WE,

1. **Tianyang BAI**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA 92121** and a resident of **Bridgewater, New Jersey**;
2. **Muhammad Nazmul ISLAM**, a citizen of **Bangladesh**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA 92121** and a resident of **Edison, New Jersey**,
3. **Juergen CEZANNE**, a citizen of **Germany**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA 92121** and a resident of **Ocean Township, New Jersey**,
4. **Sundar SUBRAMANIAN**, a citizen of **India**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA 92121** and a resident of **San Diego, California**;
5. **Ruhua HE**, 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, California**;
6. **Raghu Narayan CHALLA**, 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**;
7. **Alexei Yurievitch GOROKHOV**, a citizen of **France**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA 92121** and a resident of **San Diego, California**;
8. **Junyi LI**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA 92121-1714**, and a resident of **Chester, New Jersey**,

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 TO RECEIVE MULTIPLE SIGNALS USING MULTIPLE BEAMS** (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). **15/961,183** filed **April 24, 2018** Qualcomm Reference No. **174854** and all provisional applications relating thereto, together with U.S. Provisional Application No(s). **62/520,041**, filed **June 15, 2017**, Qualcomm Reference No. **174854P1**, (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 covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at Bridgewater, NJ, on 7-10-18  
LOCATION DATE  
Tianyang Bai  
Tianyang BAI

Done at Bridgewater, NJ, on 6/28/18  
LOCATION DATE  
Muhammad Nazmul ISLAM  
Muhammad Nazmul ISLAM

Done at Bridgewater, NJ, on 6/28/18  
LOCATION DATE  
Juergen CEZANNE  
Juergen CEZANNE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE  
Sundar SUBRAMANIAN

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE  
Ruhua HE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE  
Raghu Narayan CHALLA

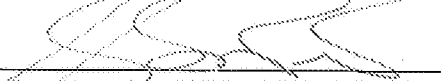
execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

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

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Tianyang BAI

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Muhammad Nazmul ISLAM

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Juergen CEZANNE

Done at San Diego, on 07/12/2018  
LOCATION DATE   
(Sundar SUBRAMANIAN)

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Ruhua HE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Raghu Narayan CHALLA



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;

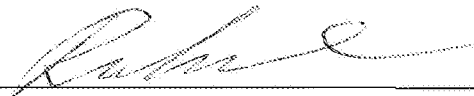
AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Tianyang BAI

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Muhammad Nazmul ISLAM

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Juergen CEZANNE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Sundar SUBRAMANIAN

Done at San Diego, CA, on 07/20/18  
LOCATION DATE   
Ruhua HE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Raghu Narayan CHALLA

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

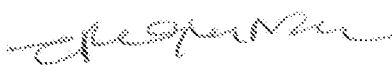
Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Tianyang BAI

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Muhammad Nazmul ISLAM

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Juergen CEZANNE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Sundar SUBRAMANIAN

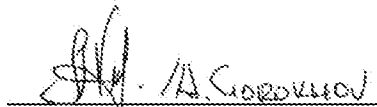
Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Ruhua HE

Done at San Diego, CA, on 8/3/18  
LOCATION DATE   
Raghu Narayan CHALLA

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

Done at \_\_\_\_\_, on \_\_\_\_\_  
City, State Date **Raghu Narayan CHALLA**

Done at San Diego, CA, on 5/20/2021  
City, State Date   
**Alexei Yurievitch GOROKHOV**

Done at \_\_\_\_\_, on \_\_\_\_\_  
City, State Date **Junyi LI**

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

\_\_\_\_\_  
Alexei Yurievitch GOROKHOV

Done at Bridgewater<sup>US</sup>, on 7/2/18  
LOCATION DATE

\_\_\_\_\_  
Junyi Li