

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3267283

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
QIANG GAO	02/23/2015
WILLIAM YEE-MING HUANG	03/11/2015
HSUN WEI DAVID WONG	02/26/2015
TERESA KA KI NG	02/19/2015
REX WANG	02/25/2015
CAROL KING MUI LAW	02/19/2015
SUHAIL JALIL	03/05/2015
<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
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14621042
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(949)760-9502
<i>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.</i>	
<b>Phone:</b>	9497600404
<b>Email:</b>	efiling@knobbe.com
<b>Correspondent Name:</b>	KNOBBE MARTENS OLSON AND BEAR LLP
<b>Address Line 1:</b>	2040 MAIN STREET
<b>Address Line 2:</b>	14TH FLOOR
<b>Address Line 4:</b>	IRVINE, CALIFORNIA 92614
<b>ATTORNEY DOCKET NUMBER:</b>	QCMLF.337A
<b>NAME OF SUBMITTER:</b>	ALLISON L.Z. WEIMER
<b>SIGNATURE:</b>	/Allison L. Z. Weimer/
<b>DATE SIGNED:</b>	03/16/2015

PATENT

**Total Attachments: 18**

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**ASSIGNMENT**

WHEREAS, WE,

1. **Qiang Gao**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
2. **William Yee-Ming Huang**, 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 Vista, CA,
3. **Hsun Wei David Wong**, a citizen of Singapore, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
4. **Teresa Ka Ki Ng**, a citizen of Hong Kong, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
5. **Rex Wang**, 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 San Diego, CA,
6. **Carol King Mui Law**, a citizen of Canada, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
7. **Suhail Jalil**, 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 Poway, 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 **SYSTEM AND METHOD FOR REDUCING SHADOW EFFECTS IN TOUCH SYSTEMS** (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). **14/621,042** filed **February 12, 2015**, Qualcomm Reference No. **143593**, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). **61/943,181**, filed **February 21, 2014**, Qualcomm Reference No. **143593P1**, (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;

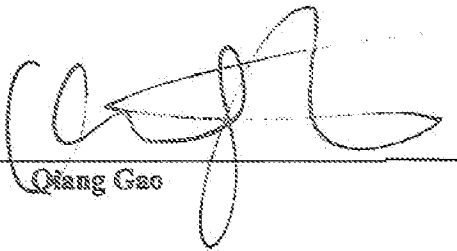
AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, 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 San Diego, on 2/23/2015  
LOCATION DATE

  
Qiang Gao

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

\_\_\_\_\_  
William Yee-Ming Huang

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

\_\_\_\_\_  
Hsun Wei David Wong

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

\_\_\_\_\_  
Teresa Ka Ki Ng

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

\_\_\_\_\_  
Rex Wang

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

\_\_\_\_\_  
Carol King Mui Law

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

\_\_\_\_\_  
Suhail Jalil

**ASSIGNMENT**

WHEREAS, WE,

1. **Qiang Gao**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
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7. **Suhail Jalil**, 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 Poway, 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 **SYSTEM AND METHOD FOR REDUCING SHADOW EFFECTS IN TOUCH SYSTEMS** (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). **14/621,042** filed **February 12, 2015**, Qualcomm Reference No. **143593**, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). **61/943,181**, filed **February 21, 2014**, Qualcomm Reference No. **143593P1**, (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 \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Qiang Gao

Done at San Diego, on 8/10/15  
LOCATION DATE William Yee-Ming Huang

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Hsun Wei David Wong

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Teresa Ka Ki Ng

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Rex Wang

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Carol King Mui Law

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Suhail Jalil



**ASSIGNMENT**

WHEREAS, WE,

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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). **14/621,042** filed **February 12, 2015**, Qualcomm Reference No. **143593**, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). **61/943,181**, filed **February 21, 2014**, Qualcomm Reference No. **143593P1**, (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 \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE

Qiang Gao

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

William Yee-Ming Huang

Done at SAN DIEGO, on 02/26/15  
LOCATION DATE

  
Hsun Wei David Wong

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

Teresa Ka Ki Ng

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

Rex Wang

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

Carol King Mui Law

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

Suhail Jalil

**ASSIGNMENT**

WHEREAS, WE,

1. **Qiang Gao**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
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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.

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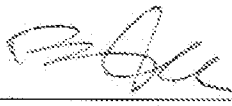
Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Qiang Gao

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE William Yee-Ming Huang

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Hsun Wei David Wong

Done at San Diego, on 02/19/15  
LOCATION DATE   
Teresa Ka Ki Ng

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Rex Wang

Done at San Diego, on 2/19/15  
LOCATION DATE   
Carol King Mui Law

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Subail Jalil

**ASSIGNMENT**

WHEREAS, WE,

1. **Qiang Gao**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
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7. **Suhail Jalil**, 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 Poway, 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 **SYSTEM AND METHOD FOR REDUCING SHADOW EFFECTS IN TOUCH SYSTEMS** (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). **14/621,042** filed **February 12, 2015**, Qualcomm Reference No. **143593**, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). **61/943,181**, filed **February 21, 2014**, Qualcomm Reference No. **143593P1**, (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 \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Qiang Gao**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **William Yee-Ming Huang**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Hsun Wei David Wong**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Teresa Ka Ki Ng**

Done at San Diego, CA, on 2/25/2015  
LOCATION DATE   
**Rex Wang**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Carol King Mui Law**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Suhail Jalil**

**ASSIGNMENT**

WHEREAS, WE,

1. **Qiang Gao**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
2. **William Yee-Ming Huang**, 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 Vista, CA,
3. **Hsun Wei David Wong**, a citizen of Singapore, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
4. **Teresa Ka Ki Ng**, a citizen of Hong Kong, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
5. **Rex Wang**, 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 San Diego, CA,
6. **Carol King Mui Law**, a citizen of Canada, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
7. **Suhail Jalil**, 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 Poway, 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 **SYSTEM AND METHOD FOR REDUCING SHADOW EFFECTS IN TOUCH SYSTEMS** (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). **14/621,042** filed **February 12, 2015**, Qualcomm Reference No. **143593**, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). **61/943,181**, filed **February 21, 2014**, Qualcomm Reference No. **143593P1**, (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 \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Qiang Gao

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE William Yee-Ming Huang

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Hsun Wei David Wong

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Teresa Ka Ki Ng

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Rex Wang

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Carol King Mui Law

Done at San Diego  
CA, on 3/15/15  
LOCATION DATE Suhail Jalil