

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT																
NATURE OF CONVEYANCE:	ASSIGNMENT																
CONVEYING PARTY DATA																	
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Daniel KOMAROMY</td> <td>02/07/2012</td> </tr> <tr> <td>Alex GANTMAN</td> <td>12/01/2011</td> </tr> <tr> <td>Brian M. ROSENBERG</td> <td>12/15/2011</td> </tr> <tr> <td>Arun BALAKRISHAN</td> <td>01/20/2012</td> </tr> <tr> <td>Gregory C. ROSE</td> <td>12/01/2011</td> </tr> <tr> <td>Anand PALANIGOUNDER</td> <td>12/02/2011</td> </tr> <tr> <td>Renwei GE</td> <td>01/20/2012</td> </tr> </tbody> </table>		Name	Execution Date	Daniel KOMAROMY	02/07/2012	Alex GANTMAN	12/01/2011	Brian M. ROSENBERG	12/15/2011	Arun BALAKRISHAN	01/20/2012	Gregory C. ROSE	12/01/2011	Anand PALANIGOUNDER	12/02/2011	Renwei GE	01/20/2012
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<table border="1"> <tr> <td>Name:</td> <td>QUALCOMM Incorporated</td> </tr> <tr> <td>Street Address:</td> <td>5775 Morehouse Drive</td> </tr> <tr> <td>Internal Address:</td> <td>Patent Department/Central Administration</td> </tr> <tr> <td>City:</td> <td>San Diego</td> </tr> <tr> <td>State/Country:</td> <td>CALIFORNIA</td> </tr> <tr> <td>Postal Code:</td> <td>92121</td> </tr> </table>		Name:	QUALCOMM Incorporated	Street Address:	5775 Morehouse Drive	Internal Address:	Patent Department/Central Administration	City:	San Diego	State/Country:	CALIFORNIA	Postal Code:	92121				
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Application Number:	13290932																
CORRESPONDENCE DATA																	
Fax Number:	(858)658-2502																
Phone:	858-845-4265																
Email:	us-docketing@qualcomm.com																
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>																	
Correspondent Name:	QUALCOMM INCORPORATED																
Address Line 1:	5775 MOREHOUSE DR.																
Address Line 4:	SAN DIEGO, CALIFORNIA 92121																

CH \$40.00 13290932

ATTORNEY DOCKET NUMBER:	111028
NAME OF SUBMITTER:	Cindy McClure
<p>Total Attachments: 8</p> <p>source=111028_13February2012_Assignment-executed#page1.tif</p> <p>source=111028_13February2012_Assignment-executed#page2.tif</p> <p>source=111028_13February2012_Assignment-executed#page3.tif</p> <p>source=111028_13February2012_Assignment-executed#page4.tif</p> <p>source=111028_13February2012_Assignment-executed#page5.tif</p> <p>source=111028_13February2012_Assignment-executed#page6.tif</p> <p>source=111028_13February2012_Assignment-executed#page7.tif</p> <p>source=111028_13February2012_Assignment-executed#page8.tif</p>	

## ASSIGNMENT

WHEREAS, WE,

1. **Daniel KOMAROMY**, a citizen of Hungary, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., and a resident of San Diego, CA,
2. **Alex GANTMAN**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., and a resident of Poway, CA,
3. **Brian M. ROSENBERG**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., and a resident of San Diego, CA,
4. **Arun BALAKRISHAN**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., and a resident of San Diego, CA,
5. **Renwei GE**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., and a resident of San Diego, CA,
6. **Gregory G. ROSE**, a citizen of Australia, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., and a resident of San Diego, CA,
7. **Anand PALANIGOUNDER**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., 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 **METHODS, DEVICES, AND SYSTEMS FOR DETECTING RETURN ORIENTED PROGRAMMING EXPLOITS** (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). **13/290,932** filed **November 7, 2011**, Qualcomm Reference No. **111028**, and all provisional applications relating thereto, (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 SAN DIEGO, on 02/07/11  
LOCATION DATE

  
Daniel KOMAROMY

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

\_\_\_\_\_  
Alex GANTMAN

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

\_\_\_\_\_  
Brian M. ROSENBERG

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

\_\_\_\_\_  
Arun BALAKRISHAN

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

\_\_\_\_\_  
Renwei GE

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

\_\_\_\_\_  
Gregory G. ROSE

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

\_\_\_\_\_  
Anand PALANIGOUNDER

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

Done at San Diego, on 12/1/2011  
LOCATION DATE  
Alex GANTMAN

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE  
Brian M. ROSENBERG

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

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

Done at San Diego, CA, on 2011-12-01  
LOCATION DATE  
Gregory G. ROSE


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

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LOCATION DATE  
Daniel KOMAROMY

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

Done at San Diego, on 15 Dec 2011  
LOCATION DATE  
  
Brian M. ROSENBERG

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

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

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE  
Gregory G. ROSE

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

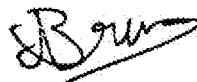
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**Alex GANTMAN**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE  
**Brian M. ROSENBERG**

Done at SAN DIEGO, CA, on 1/20/2012  
LOCATION DATE  
  
**Arun BALAKRISHAN**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE  
**Renwei GE**

Done at \_\_\_\_\_, on \_\_\_\_\_  
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**Gregory G. ROSE**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE  
**Anand PALANIGOUNDER**



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LOCATION DATE Alex GANTMAN

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Brian M. ROSENBERG

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

Done at San Diego, CA, USA, on 1/20/2012  
LOCATION DATE Renwei GE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Gregory G. ROSE

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

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LOCATION DATE Renwei GE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Gregory G. ROSE

Done at San Diego, on 12/2/2011  
LOCATION DATE P. Anand  
Anand PALANIGOUNDER