

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

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>Youn Hyoung Heo</td> <td>01/23/2013</td> </tr> <tr> <td>Yujian Zhang</td> <td>01/07/2013</td> </tr> </tbody> </table>		Name	Execution Date	Youn Hyoung Heo	01/23/2013	Yujian Zhang	01/07/2013				
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Youn Hyoung Heo	01/23/2013										
Yujian Zhang	01/07/2013										
RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>Intel Corporation</td> </tr> <tr> <td>Street Address:</td> <td>2200 Mission College Blvd</td> </tr> <tr> <td>City:</td> <td>Santa Clara</td> </tr> <tr> <td>State/Country:</td> <td>CALIFORNIA</td> </tr> <tr> <td>Postal Code:</td> <td>95054</td> </tr> </table>		Name:	Intel Corporation	Street Address:	2200 Mission College Blvd	City:	Santa Clara	State/Country:	CALIFORNIA	Postal Code:	95054
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PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13729117</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13729117						
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Application Number:	13729117										
CORRESPONDENCE DATA											
<p>Fax Number: 6123393061  <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 612-373-6900        Email: saustin@slwip-rc.com        Correspondent Name: Schwegman, Lundberg, &amp; Woessner P.A.        Address Line 1: PO Box 2938        Address Line 4: Minneapolis, MINNESOTA 55402</p>											
ATTORNEY DOCKET NUMBER:	884.M28US1										
NAME OF SUBMITTER:	Sally Austin										
<p>Total Attachments: 9        source=884M28US1ASSNXMITsigned#page1.tif        source=884M28US1ASSNXMITsigned#page2.tif        source=884M28US1ASSNXMITsigned#page3.tif        source=884M28US1ASSNXMITsigned#page4.tif</p>											

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RECORDATION FORM COVER SHEET  
PATENTS ONLY

Atty Ref/Docket No.: 884.M28US1

Patent and Trademark Office

To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Youn Hyoung Heo, Yujian Zhang

Additional name(s) of conveying party(ies) attached?

[ ] Yes [X] No

2. Name and address of receiving party(ies):

Name: Intel Corporation

Street Address: 2200 Mission College Blvd.

City: Santa Clara State: CA Zip: 95054

Country: United States of America

3. Nature of conveyance:

Additional name(s) & address(es) attached? [ ] Yes [X] No

[X] Assignment

[ ] Merger

[ ] Security Agreement [ ] Change of Name

[ ] Other

Execution Date: January 23, 2013, January 7, 2013

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

B. Patent No.(s)

Serial No. 13/729,117, filed December 28, 2012

Additional numbers attached? [ ] Yes [X] No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Gregory J. Gorrie

Address:

Schwegman, Lundberg & Woessner, P.A.

P.O. Box 2938

Minneapolis, MN 55402--0938

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$ 40.00

[ ] Enclosed

[X] Authorized to be charged to deposit account  
19-0743

8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743

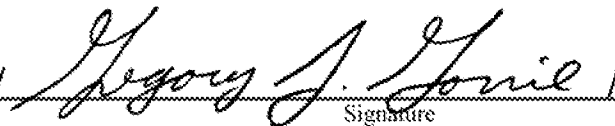
DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Gregory J. Gorrie/Reg. No. 36,530 /

Name of Person Signing



Signature

January 23, 2013

Date

Total number of pages including cover sheet: 9

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks

Mail Stop Assignment Recordation Services

P.O. Box 1450

Alexandria, VA 22313-1450

PATENT  
REEL: 029680 FRAME: 0558

## **ASSIGNMENT**

WHEREAS, Youn Hyoung Heo and Yujian Zhang (hereinafter the "Undersigned") have made one or more inventions and other subject matter (hereinafter collectively referred to as the "Invention") which are described in a patent application filed on December 28, 2012, which application was assigned US patent application serial number 13/729,117, and which is titled ENHANCED NODE B, USER EQUIPMENT AND METHODS FOR DISCONTINUOUS RECEPTION IN INTER-ENB CARRIER AGGREGATION; which are described in a patent application filed on August 3, 2012, which application was assigned US application serial number 61/679,627, and which is titled ADVANCED WIRELESS COMMUNICATION SYSTEMS AND TECHNIQUES.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency, and adequacy of which are hereby acknowledged by the Undersigned, the Undersigned do hereby irrevocably and unconditionally:

CONVEY, ASSIGN, AND TRANSFER to Intel Corporation (the "Assignee"), a corporation of the State of Delaware, having a place of business at 2200 Mission College Blvd., Santa Clara, CA 95054, the Undersigned's entire right, title, and interest for the United States and all foreign countries and jurisdictions in and to:

the Invention which is disclosed in the above-identified application or applications;

such application or applications, and all divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other applications for a patent or patents which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries and jurisdictions based in whole or in part on any of such Invention (including any application for a utility model or an innovation patent application);

all original and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions based in whole or in part on any of such Invention;

including the right to claim priority to the above-identified patent application or applications in relation to subject matter based in whole or in part on the above-identified patent application or applications and any of the foregoing including the right to file foreign applications under the provisions of any convention or treaty;

and including the right to all causes of action, remedies, and other enforcement rights related to the above-identified application or applications, including without limitation the right to sue for past, present, or future infringement, misappropriation, or violation of any and all rights related to the above-identified patent application or applications and any of the foregoing, including the right to obtain and collect damages for past, present, or future infringement;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such Invention to the Assignee;

**Assignment**

Assignors: Youn Hyoung Heo et al.

Title: ENHANCED NODE B, USER EQUIPMENT AND METHODS FOR DISCONTINUOUS RECEPTION IN INTER-ENB CARRIER AGGREGATION

Page 2 of 4

Docket No: 884.M28US1

Client Ref. No. P49410

AUTHORIZE AND REQUEST that any attorney associated with U.S. Patent and Trademark Office (USPTO) Customer No. 45457 may (directly or through his/her designee) delete, insert, or alter any information related to the above-identified patent application or applications or any of the foregoing, after execution of this Assignment;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or shall be made to others by the Undersigned, and that the full right to convey the same as herein expressed is possessed by the Undersigned;

COVENANT, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the Undersigned shall (1) execute all provisional, non-provisional, divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other patent applications for the Invention; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers for the Invention; (3) communicate to the Assignee all facts known to the Undersigned relating to the Invention and the history thereof; (4) cooperate with the Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the applications or patents for the Invention; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such Invention in the Assignee, or for securing, maintaining and enforcing proper patent protection for the Invention;

COVENANT, that should any provision of this agreement be held unenforceable by an authority of competent jurisdiction, such a ruling shall not affect the validity and enforceability of the remaining provisions. To the extent that any such provision is found to be unenforceable, the Undersigned, when requested and without compensation shall act in good faith to substitute for such provision a new provision with content and purpose as close as possible to the provision deemed unenforceable.

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives, and successors of the Undersigned, and is to extend to the benefit of the successors, assigns, and nominees of the Assignee.

AGREED as of the date of my signature below:

Assignment

Assignors: Youn Hyoung Heo et al.

Docket No. 884 M28U/31

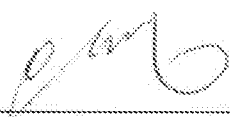
Client Ref. No. P49410

Title: ENHANCED MODE B USER EQUIPMENT AND METHODS FOR DISCONTINUOUS RECEPTION IN INTER-ENB CARRIER  
AGGREGATION

Page 3 of 4

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Assignor:

(Signature):  \_\_\_\_\_

Name: Youn Hyoung Heo

City/State: Seoul, Republic of Korea

Date: January 23, 2013

**Assignment**

Assignors: Youn Hyoung Heo et al.

Title: ENHANCED NODE B, USER EQUIPMENT AND METHODS FOR DISCONTINUOUS RECEPTION IN INTER-ENB CARRIER AGGREGATION

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Docket No: 884.M28US1

Client Ref. No. P49410

**Assignor:**

(Signature): \_\_\_\_\_

Name: Yujian Zhang

City/State: Beijing, China

Date: \_\_\_\_\_

## **ASSIGNMENT**

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and including the right to all causes of action, remedies, and other enforcement rights related to the above-identified application or applications, including without limitation the right to sue for past, present, or future infringement, misappropriation, or violation of any and all rights related to the above-identified patent application or applications and any of the foregoing, including the right to obtain and collect damages for past, present, or future infringement;

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Page 3 of 4

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Client Ref. No. P49410

**Assignor:**

(Signature): \_\_\_\_\_

Name: **Youn Hyoung Heo**

City/State: **Seoul, Republic of Korea**

Date: \_\_\_\_\_

**Assignment**

Assignors: Youn Hyeung Heo et al.

Title: ENHANCED NODE B, USER EQUIPMENT AND METHODS FOR DISCONTINUOUS RECEPTION IN INTER-ENB CARRIER AGGREGATION

Page 4 of 4

Docket No: 884.M28US1

Client Ref. No. P49410

Assignor:

(Signature): 张 玉 建

Name: Yujian Zhang

City/State: Beijing, China

Date: 7 Jan 2013