

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>Ali Yazdan Panah</td> <td>10/05/2012</td> </tr> <tr> <td>Shu-Ping Yeh</td> <td>10/19/2012</td> </tr> <tr> <td>Nageen Himayat</td> <td>10/05/2012</td> </tr> <tr> <td>Shilpa Talwar</td> <td>10/05/2012</td> </tr> </tbody> </table>		Name	Execution Date	Ali Yazdan Panah	10/05/2012	Shu-Ping Yeh	10/19/2012	Nageen Himayat	10/05/2012	Shilpa Talwar	10/05/2012
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Ali Yazdan Panah	10/05/2012										
Shu-Ping Yeh	10/19/2012										
Nageen Himayat	10/05/2012										
Shilpa Talwar	10/05/2012										
RECEIVING PARTY DATA											
Name:	Intel Corporation										
Street Address:	2200 Mission College Blvd										
City:	Santa Clara										
State/Country:	CALIFORNIA										
Postal Code:	95054										
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>13631137</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13631137						
Property Type	Number										
Application Number:	13631137										
CORRESPONDENCE DATA											
Fax Number:	6123393061										
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
Phone:	612-373-6900										
Email:	saustin@slwip-rc.com										
Correspondent Name:	Schwegman, Lundberg, & Woessner P.A.										
Address Line 1:	PO Box 2938										
Address Line 4:	Minneapolis, MINNESOTA 55402										
ATTORNEY DOCKET NUMBER:	884.L82US1										
NAME OF SUBMITTER:	Sally Austin										
<p>Total Attachments: 13 source=884L82US1ASSNXMLTsigned#page1.tif</p>											

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RECORDATION FORM COVER SHEET
PATENTS ONLY

Atty Ref/Docket No.: 884.L82US1

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):

Ali Yazdan Panah, Shu-Ping Yeh, Nageen Himayat,
Shilpa Talwar

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

Yes No

3. Nature of conveyance:

Assignment Merger
 Security Agreement Change of Name
 Other

Execution Date: October 5, 2012, October 19, 2012,
October 5, 2012, October 5, 2012

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

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

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. 13/631,137, filed September 28, 2012

Additional numbers attached? Yes No

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

Name: Theresa R. Stadheim

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

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.

Theresa R. Stadheim/Reg. No. 67,464

/Theresa R. Stadheim/

November 15, 2012

Name of Person Signing

Signature

Date

Total number of pages including cover sheet: 13

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: 029309 FRAME: 0706

ASSIGNMENT

WHEREAS, Ali Yazdan Panah, Shu-Ping Yeh, Nageen Himayat, Shilpa Talwar (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 September 28, 2012, which application was assigned US patent application serial number 13/631,137, and which is titled METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS; which are described in a patent application filed on May 11, 2012, which application was assigned US application serial number 61/645,223, 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: Ali Yaqub Panoh et al

Title: METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS

Page 2 of 6

Docket No. 2014.1.83304

Client Ref. No. P46868

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 effect 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

Assignor: Ali Yazdan Panah et al.

Title: METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS

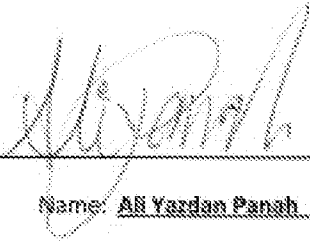
Page 3 of 6

DocId No: 824,82193

Client Ref No: P48868

Assignor:

(Signature):



Name: Ali Yazdan Panah

City/State: Alhiso, CA

Date:

10/5/2012

Assignment

Assignor: An Yazdan Panah et al.

Title: METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS

Page 4 of 8

DocId No: 884123151

Class Ref. No. P46868

Assignor:

(Signature): _____

Name: Shu-Ping Yeh

City/State: Mountain View, CA

Date: _____

Assignment

Assignor: Ali Yazdan Panah et al.

Title: METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS

Page 5 of 6

Docket No. 094.1.831.81

Client Ref. No. P46868

Assignor:

(Signature):



Name: Nagreen Hinnayat

City/State: Fremont, CA

Date:

10/05/2012

Assignment

Assignors: Ali Yaman Farah et al


Title: METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS

Page 6 of 6

Docket No. 2011-0101

Client Ref. No. 146882

Assignor:

(Signature):  _____

Name: Shilpa Talwar

City/State: Los Altos, CA

Date: 10/5/12

ASSIGNMENT

WHEREAS, Ali Yazdan Panah, Shu-Ping Yeh, Nageen Himayat, Shilpa Talwar (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 September 28, 2012, which application was assigned US patent application serial number 13/631,137, and which is titled METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS; which are described in a patent application filed on May 11, 2012, which application was assigned US application serial number 61/646,223, and which is titled ADVANCED WIRELESS COMMUNICATION SYSTEMS AND TECHNIQUES.

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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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Assignment

Assignors: Ali Yazdan Panah et al.

Title: METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS

Page 2 of 6

Docket No: 884.L82US1

Client Ref. No. P46868

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Assignment

Assignors: Ali Yazdan Panah et al.

Title: METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS

Page 3 of 6

Docket No: 884.L82US1

Client Ref. No. P46868

Assignor:

(Signature): _____

Name: **Ali Yazdan Panah**

City/State: **Alviso, CA**

Date: _____

Assignment

Assignors: Ali Yazdan Panah et al.

Title: METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS

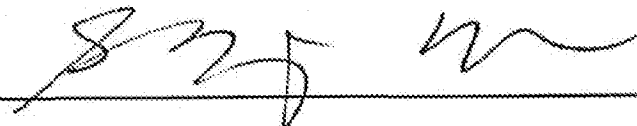
Page 4 of 6

Docket No: 854182US1

Client Ref No: P46868

Assignor:

(Signature):



Name: Shu-Ping Yeh

City/State: Mountain View, CA

Date:

Oct. 19, 2012

Assignment

Assignors: Ali Yazdan Panah et al.

Title: METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS

Page 5 of 6

Docket No: 884.L82US1

Client Ref. No. P46868

Assignor:

(Signature): _____

Name: **Nageen Himayat**

City/State: **Fremont, CA**

Date: _____

Assignment

Assignors: Ali Yazdan Panah et al.

Title: METHODS AND APPARATUSES TO IMPROVE ON-TIME THROUGHPUT FOR INTEGRATED MULTI-RAT HETEROGENEOUS NETWORKS

Page 6 of 6

Docket No: 884.L82US1

Client Ref. No. P46868

Assignor:

(Signature): _____

Name: Shilpa Talwar

City/State: Los Altos, CA

Date: _____