502929071 08/11/2014

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| GANG XIONG | 07/22/2014 |
| HUANING NIU | 08/07/2014 |
| DEBDEEP CHATTERJEE | 07/22/2014 |
| JONG-KAE FWU | 07/22/2014 |

RECEIVING PARTY DATA

| Name: | INTEL IP CORPORATION |
|-----------------|----------------------------|
| Street Address: | 2200 MISSION COLLEGE BLVD. |
| City: | SANTA CLARA |
| State/Country: | CALIFORNIA |
| Postal Code: | 95054 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14316156 |

CORRESPONDENCE DATA

Fax Number: (612)677-3572

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.

Phone: 6122369997

Email: STOEL@CPAGLOBAL.COM

Correspondent Name: STOEL RIVES, LLP. Address Line 1: C/O CPA GLOBAL Address Line 2: P.O. BOX 52050

Address Line 4: MINNEAPOLIS, MINNESOTA 55402

| ATTORNEY DOCKET NUMBER: | P66307 |
|-------------------------|----------------|
| NAME OF SUBMITTER: | KEVIN AUSTAD |
| SIGNATURE: | /Kevin Austad/ |
| DATE SIGNED: | 08/11/2014 |

Total Attachments: 5

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> PATENT REEL: 033504 FRAME: 0066

Attorney Docket No.: P66307

ASSIGNMENT

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

GANG XIONG; HUANING NIU; DEBDEEP CHATTERJEE; JONG-KAE FWU

hereby sell, assign, and transfer to:

Intel IP Corporation

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions and improvements that are disclosed in the International application entitled:

SYSTEMS, METHODS, AND DEVICES FOR DEVICE-TO-DEVICE DISCOVERY

(I hereby authorize and request any attorney having appropriate authority from the assignee to insert on the designated lines below, the filing date and application number of said application when known.)

| which was filed on | June 26, 2014 | as |
|-----------------------|---------------|-----|
| | | |
| US Application Number | 14/316,156 | and |

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below,

and in and to said International application and all related applications (e.g. national phase applications, divisional applications, continuation applications, reexaminations, reissues, and the like) that have been or shall be filed in the United States and/or all foreign countries on said inventions and improvements, as well as in and to all rights of priority resulting from the filing of said International application;

agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all design, utility, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and

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improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

| Commence of the second | 07/22/2014 |
|------------------------|-------------|
| Gang Xiong | Date signed |
| Huaning Niu | Date signed |
| Debdeep Chatterjee | Date signed |
| Jong-Kae Fwu | Date signed |

improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

| Gang Xiong | Date signed |
|--------------------|-------------|
| AZ Nin | 8/2/2014 |
| Huaning Niu | Date signed |
| | |
| Debdeep Chatterjee | Date signed |
| | |
| Jong-Kae Fwu | Date signed |

improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

| Gang Xiong | Date signed |
|--|---------------------------|
| Huaning Niu | Date signed |
| Seld ook (Vallas). Deblieep Chatterjee | 07/22/2014 Date signed |
| Jong-Kae Fwu | Date signed |

Attorney Docket No.: P66307

improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

| Gang Xiong | Date signed |
|--------------------|--------------|
| Huaning Niu | Date signed |
| Debdeep Chatterjee | Date signed |
| July July | July 22,2014 |
| Jong-Kae Fwu | Date/signed |