## 502603613 12/16/2013

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2649972

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
LIANG XIAO	11/01/2011
CHUNXUAN YE	10/31/2011
SUHAS MATHUR	12/09/2013
YOGENDRA C. SHAH	10/31/2011
ALEXANDER REZNIK	11/07/2011

### **RECEIVING PARTY DATA**

Name:	INTERDIGITAL PATENT HOLDINGS, INC.
Street Address:	3411 SILVERSIDE ROAD
Internal Address:	CONCORD PLAZA, SUITE 105, HAGLEY BUILDING
City:	WILMINGTON
State/Country:	DELAWARE
Postal Code:	19810

### PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13121190

# CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	2-2175US02
NAME OF SUBMITTER:	JULIA C. HACKSTIE

502603613 REEL: 031790 FRAME: 0384

13121190

Signature:	/Julia C. Hackstie/
Date:	12/16/2013
Total Attachments: 7 source=executed_assignment#page1.tif source=executed_assignment#page2.tif source=executed_assignment#page3.tif source=executed_assignment#page4.tif source=executed_assignment#page5.tif source=executed_assignment#page6.tif source=executed_assignment#page7.tif	

PATENT REEL: 031790 FRAME: 0385

#### ASSIGNMENT

WHEREAS, we, Liang Xiao, residing at Room 5-2503, Wuyuan Gongyu, Wuyuan DongSanLi, Xiamen, Fujian, China 361009; Chunxuan Ye, residing at 2 Stirling Court, Wayne, Pennsylvania 19087; Suhas Mathur, residing at 402 Merrywood Drive, Edison, New Jersey 08817; Yogendra C. Shah, residing at 10 Regency Court, Exton, Pennsylvania 19341, and Alexander Reznik, residing at 1212 River Road, Titusville, New Jersey 08560, hereinafter referred to as the ASSIGNORS, are joint inventors of certain inventions or improvements for which we have made application for Letters Patent to the United States, identified as Application No. 13/121,190, filed March 26, 2011, entitled AUTHENTICATION FOR SECURE WIRELESS COMMUNICATION; and

WHEREAS, InterDigital Patent Holdings, Inc., hereinafter referred to as the ASSIGNEE, of 3411 Silverside Road, Concord Plaza, Suite 105, Hagley Building, Wilmington, DE 19810, a corporation of Delaware, is desirous of acquiring the entire right, title and interest in and to the said inventions or improvements and in and to the said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in any and all countries.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, and intending to be legally bound hereby, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said ASSIGNEE, our entire right, title and interest in and to said inventions or improvements and said application and any and all continuations, divisions and renewals of and substitutes for said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, including our full right to sue for and collect damages for past violations of provisional rights having arisen from any publication of said application or any continuations, divisions, or renewals of or substitutes for said application. We further assign to and authorize said ASSIGNEE, to file in our names applications for Letters Patent in all countries, the same to be held and enjoyed by said ASSIGNEE, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by us had this assignment, sale and transfer not been made.

AND we hereby covenant that we have full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith, and we further covenant and agree that we will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said inventions or improvements, said application and said Letters Patent to said ASSIGNEE, its successors, assigns, nominees, or legal representatives, and each of us agrees to communicate to said ASSIGNEE or to its nominee all known facts respecting said inventions or improvements, said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said ASSIGNEE, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries.

AND we hereby authorize and request the Commissioner of Patents and Trademarks 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 as aforesaid, to issue to said ASSIGNEE, as ASSIGNEE of the entire right, title and interest, any and all Letters Patent for said inventions or improvements, including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

AND this Assignment may be executed in multiple counterparts, each of which shall be deemed to be an original of this Assignment. Additionally, we hereby authorize our attorneys to collect the signature pages of each executed counterpart and to attach those signature pages to a single copy of this instrument, which single copy and attached signature pages together shall constitute an original of this Assignment.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

Nov. (. 2011 Date	Mong Xia	(L.S.)
STATEMENT OF WITNE	'ସବ	
	nln China (City and Country)	
Thisday of		
s		
1,J. ddress is <u>RooM</u> S	njie Shi -2002, Uluyuan ina, 36/009	whose full Gangyu
Xiamon, Ch	ina, 36/009	
day of $\frac{1}{2}$ described herein.	, 2011, and such assignor is	execute this assignment on the spersonally known to me to be the
	Junite Signature of Witness	Shi

\_\_\_\_(L.S.) STATEMENT OF WITNESS SIGNED at \_\_\_\_\_\_(City and Country) 781 Third Average, King of Procein, PA 19400 USA This 3/st day of October, 2011. I, WILMA MACKAY whose full address is 781 Third Avenue, King of Prusele, PA 19406 USA was personally present and did see Change execute this assignment on the Bland day of October , 2011, and such assignor is personally known to me to be the

DOCKET NO.: 2-2175US02

person described herein.

In Nausenj

$\frac{ 2/09/2013}{\text{Date}}$	Suhas Mathur	(L.S.)
	S dands (Vitteria)	
STATEMENT OF WITNESS		
SIGNED at Neu Yor	(City and Country)	
This 9th day of December	or,2011/3	
I, BARIS	COSKUN	whose full
uddress is 518 Gregory Weekawten, NT	Ave Apl A302 07086	
	see Sikas Mathur ( _, 201 <b>B</b> and such assignor is pe	******
oction described herein.	BOU	
	Signature of Witness	A A A A A A A A A A A A A A A A A A A

31-00-2011	4. Jah,	(4.6)
Date	Yogendra C. Shah	(L.S.)
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STATEMENT OF WITN	F22	
781 Thi SIGNED at	rd Avenue, King of Prussis, PA 19	3406 USA
	(City and Country)	
This 3151 day of Octo	<u>044</u> , 2011.	
I, William	a Mackay	whose full
address is <u>781 Third Ave</u>	nue, King of Prussia, PA 19406 L	ISA
was personally present and Sist day of Colobber person described herein.	did see Youndam Shaw , 2011, and such assignor i	execute this assignment on the spersonally known to me to be the
	Notes  Signature of Witness	Leany

Of ribreader 2011 Date  Alexander Reznik  (L.S.)	
STATEMENT OF WITNESS	
SIGNED at King of Parson a Panaghraina, USA (City and Country)	· · · · · · · · · · · · · · · · · · ·
This Off day of ordinary 2011.	
I, Lay Carlink whose ful address is 781 Divd Anny King of Euska	1
address is 181 Third Levy King of Pusking.  Consylvation USA	
was personally present and did see <u>All all Carlo</u> execute this assignment of the second day of the second described herein.	ient on the
Signature of Witness	

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