

PATENT ASSIGNMENT

Electronic Version v1.1
Stylesheet Version v1.1

SUBMISSION TYPE:

NEW ASSIGNMENT

NATURE OF CONVEYANCE:

ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Erdem Bala	06/16/2010
Guodong Zhang	06/16/2010
Philip Pietraski	06/16/2010
Sung Hyuk Shin	06/17/2010
Peter Wang	06/16/2010
Joseph Levy	06/16/2010
Donald Grieco	05/13/2010
Kyle Pan	05/11/2010
Shankar Somasundaram	05/06/2010
Marian Rudolf	05/06/2010

RECEIVING PARTY DATA

Name:	InterDigital Patent Holdings, Inc.
Street Address:	3411 Silverside Road
Internal Address:	Hagley Building, Suite 105
City:	Wilmington
State/Country:	DELAWARE
Postal Code:	19810

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12582459

CORRESPONDENCE DATA

Fax Number: (215)568-3439

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 215-568-3100

Email: madevine@woodcock.com

Correspondent Name: Woodcock Washburn LLP

501209939

PATENT
REEL: 024564 FRAME: 0694

CH \$40.00 12582459

Address Line 1:	2929 Arch Street
Address Line 2:	12th Floor
Address Line 4:	Philadelphia, PENNSYLVANIA 19104

ATTORNEY DOCKET NUMBER:	ILTE-0391/IPH-2-2200US02
-------------------------	--------------------------

NAME OF SUBMITTER:	Vincent J. Roccia
--------------------	-------------------

<p>Total Attachments: 8 source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif source=Assignment#page4.tif source=Assignment#page5.tif source=Assignment#page6.tif source=Assignment#page7.tif source=Assignment#page8.tif</p>

ASSIGNMENT

WHEREAS, we Erdem Bala; Guodong Zhang; Philip Pietraski; Sung-Hyuk Shin; Peter Wang; Marian Rudolf; Joseph Levy; Donald Grieco; Shankar Somasundaram; Kyle Pan, hereinafter referred to as the assignors, residing respectively at 17 Hallock Street, Floor #2, Farmingdale, NY 11735; 14 Walnut Drive, Syosset, NY 11791; 7 Talbot Place, Huntington Station, NY 11746; 104 Eidner Way, Northvale, NJ 07647; 412 Pond Path, E. Setauket, NY 11733; 525 Lucien L'Allier, Apartment #204, Montreal, QC H3C 4L3; 26 East Webster Street, Merrick, NY 11566; 18 Shore Road, Manhasset, NY 11030; Flat 150, Clarence Gate Gardens, London, NW16AP; 43 Avalon Circle, Smithtown, NY 11787 are the joint inventors of certain inventions or improvements for which we have made application for Letters Patent to the United States, identified as Application No. 12/582,459, filed October 20, 2009, entitled **CONTROL CHANNEL SIGNALING AND ACQUISITION FOR CARRIER AGGREGATION**; and

WHEREAS, InterDigital Patent Holdings, Inc. , hereinafter referred to as the assignee, of 3411 Silverside Road, Hagley Building, Suite 105, 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, the 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 the 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.

16 June 2010 Erdem Bala (L.S.)
Date Erdem Bala

STATE OF New York :
COUNTY OF Suffolk : SS

On this 16 day of June, year of 2010, before me personally came the above named Erdem Bala to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

Maureen Borrero
Notary Public
MAUREEN BORRERO
Notary Public - State of New York
No. 01806145147
Qualified in Suffolk County
Commission Expires May 1, 2014

16 June 2010 Guodong Zhang (L.S.)
Date Guodong Zhang

STATE OF New York :
COUNTY OF Suffolk : SS

On this 16 day of June, year of 2010, before me personally came the above named Guodong Zhang to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

Maureen Borrero
Notary Public
MAUREEN BORRERO
Notary Public - State of New York
No. 01806145147
Qualified in Suffolk County
Commission Expires May 1, 2014

16 June 2010 (L.S.)
Date Philip Pietraski

STATE OF New York :
COUNTY OF Suffolk : SS

On this 16 day of June, year of 2010, before me personally came the above named Philip Pietraski to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

Maureen Borrero
Notary Public
MAUREEN BORRERO
Notary Public - State of New York
No. 01B06145147
Qualified in Suffolk County
Commission Expires May 1, 2014

17 June 2010 (L.S.)
Date Sung-Hyuk Shin

STATE OF New York :
COUNTY OF Suffolk : SS

On this 17 day of June, year of 2010 before me personally came the above named Sung-Hyuk Shin to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

Maureen Borrero
Notary Public
MAUREEN BORRERO
Notary Public - State of New York
No. 01B06145147
Qualified in Suffolk County
Commission Expires May 1, 2014

16 June 2010
Date

Peter Wang (L.S.)
Peter Wang

STATE OF New York :
COUNTY OF Suffolk : SS

On this 16 day of June, year of 2010, before me personally came the above named Peter Wang to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

Maureen Borrero
Notary Public
MAUREEN BORRERO
Notary Public - State of New York
No. 01806145147
Qualified in Suffolk County
Commission Expires May 1, 2014

16 June 2010
Date

Joseph Levy (L.S.)
Joseph Levy

STATE OF New York :
COUNTY OF Suffolk : SS

On this 16 day of June, year of 2010, before me personally came the above named Joseph Levy to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

Maureen Borrero
Notary Public

MAUREEN BORRERO
Notary Public - State of New York
No. 01806145147
Qualified in Suffolk County
Commission Expires May 1, 2014

13 May 2010
Date

Donald Grieco (L.S.)
Donald Grieco

STATE OF New York: SS
COUNTY OF Suffolk:

On this 13 day of May, year of 2010, before me personally came the above named Donald Grieco to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

Maureen Borrero
Notary Public
MAUREEN BORRERO
Notary Public - State of New York
No. 01BO6145147
Qualified in Suffolk County
Commission Expires May 1, 2014
(L.S.)

11-May-2010
Date

Kyle Pan
Kyle Pan

STATE OF New York: SS
COUNTY OF Suffolk:

On this 11 day of May, year of 2010, before me personally came the above named Kyle Pan to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

Migaly Lopez
Notary Public

DOCKET NO.: ILTE-0391/IPH-2-2200US02

6th MAY, 2010
Date

Shankar (L.S.)
Shankar Somasundaram

STATEMENT OF WITNESS

SIGNED at LONDON UK
(City) (Country)

This 6th day of MAY, 2010

I, SUSHANT KUMAR whose full
residence address is 150 CLARENCE GATE GARDENS, LONDON
NW1 6AP

was personally present and did see SHANKAR execute the above assignment on the
6th day of MAY, 2010 and such assignor is personally known to me to be the
person described in such document.

Shankar
Signature of Witness

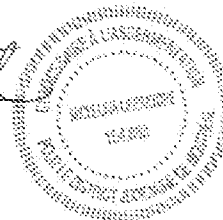
MAY 6th 2010
Date

Marian Rudolf (L.S.)
Marian Rudolf

Province
STATE OF Quebec :
Municipality : SS
COUNTY OF MONTREAL :

On this 6th day of MAY, year of 10, before me personally came the above named MARIAN RUDOLF to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

G. Lelievre
Notary Public

A circular notary seal for G. Lelievre, Notary Public, with the text "NOTAIRE PUBLIC" and "G. LELIEVRE" visible.