

**PATENT ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the Assignor's name from Kyle Jing-Lin Pan to read Kyle Jung-Lin Pan previously recorded on Reel 023154 Frame 0319. Assignor(s) hereby confirms the Assignment of Assignor's Interest.
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
Kyle Jung-Lin Pan	08/14/2009
Donald M. Grieco	08/13/2009
Robert L. Olesen	08/19/2009
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	InterDigital Patent Holdings, Inc.
<b>Street Address:</b>	3411 Silverside Road
<b>Internal Address:</b>	Concord Plaza, Suite 105, Hagley Building
<b>City:</b>	Wilmington
<b>State/Country:</b>	DELAWARE
<b>Postal Code:</b>	19810
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	12496129
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(215)568-6499
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
<b>Phone:</b>	215-568-6400
<b>Email:</b>	AHuq@volpe-koenig.com
<b>Correspondent Name:</b>	Volpe and Koenig, P.C.
<b>Address Line 1:</b>	30 South 17th Street
<b>Address Line 2:</b>	United Plaza, Suite 1600
<b>Address Line 4:</b>	Philadelphia, PENNSYLVANIA 19103
<b>ATTORNEY DOCKET NUMBER:</b>	IPH-2-2117.01.US AAH/LAD
<b>NAME OF SUBMITTER:</b>	Abhik A. Huq

**CH \$40.00 12496129**

**500954980**

**PATENT**  
**REEL: 023193 FRAME: 0946**

**Total Attachments: 9**

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**08/27/2009**  
**500947431**

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

**CONVEYING PARTY DATA**

Name	Execution Date
Kyle Jing-Lin Pan	08/14/2009
Donald M. Grieco	08/13/2009
Robert L. Olesen	08/19/2009

**RECEIVING PARTY DATA**

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

**PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	12496129

**CORRESPONDENCE DATA**

Fax Number: (215)588-6499  
*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*  
 Phone: 215-588-6400  
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 Correspondent Name: Volpe and Koenig, P.C.  
 Address Line 1: 30 South 17th Street  
 Address Line 2: United Plaza, Suite 1600  
 Address Line 4: Philadelphia, PENNSYLVANIA 19103

ATTORNEY DOCKET NUMBER:	IPH-2-2117.01.US-DNC/KLL
NAME OF SUBMITTER:	Daniel N. Calder

CH \$40.00 12496129

**Total Attachments: 5**

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## ASSIGNMENT

Kyle Jung-Lin Pan, residing at 43 Avalon Circle, Smithtown, New York 11787, the United States of America, a citizen of the United States of America; Donald M. Grieco, residing at 18 Shore Road, Manhasset, New York 11030, the United States of America, a citizen of the United States of America; and Robert L. Olesen, residing at 3 Country Club Drive, Huntington, New York 11743, the United States of America, a citizen of the United States of America, (hereafter jointly and severally referred to as the undersigned), are the inventors of

### METHOD AND APPARATUS FOR MEASURING AND REPORTING A RANK AND A PRECODING MATRIX FOR MULTIPLE-INPUT MULTIPLE-OUTPUT COMMUNICATION

for which the undersigned have executed an application for United States Letters Patent, U.S. Patent Application No. 12/496,129, filed July 1, 2009.

InterDigital Patent Holdings, Inc., a Delaware corporation, having a principal place of business at 3411 Silverside Road, Concord Plaza, Suite 105, Hagley Building, Wilmington, Delaware 19810, USA, (hereafter referred to as the assignee), is desirous of acquiring the entire right, title and interest in said invention, all applications for and all letters patent issued on said invention.

For good and valuable consideration, the receipt and sufficiency of which is acknowledged, the undersigned, intending to be legally bound, do hereby sell, assign and transfer to the assignee and assignee's successors, assigns and legal representatives the entire right, title and interest in said invention and all patent applications thereon, including, but not limited to, the application for United States Letters Patent entitled as above, and all divisions and continuations thereof, and in all letters patent, including all reissues and reexaminations thereof, throughout the world, including the right to claim priority under the Paris Convention or other treaty.

It is agreed that the undersigned shall be legally bound, upon request of the assignee, to supply all information and evidence relating to the making and practice

Atty. Docket No. IPH-2-2117.01.US

of said invention, to testify in any legal proceeding relating thereto, to execute all instruments proper to patent the invention throughout the world for the benefit of the assignee, and to execute all instruments proper to carry out the intent of this instrument.

The undersigned warrant that the rights and property herein conveyed are free and clear of any encumbrance.

EXECUTED under seal on this 14 day of August,  
2009 at Melville, NY  
(Place)

Witness:

Maurice Bovee

Kyle Jung-Lin Pan (L.S.)  
Kyle Jung-Lin Pan

State of New York  
County of Suffolk ss.

On this 14 day of August, 2009 before me personally appeared Kyle Jung-Lin Pan, to me known to be the person described herein and who executed the foregoing instrument, and acknowledged that he executed the same knowingly and willingly and for the purposes therein contained.

Witness my hand and Notarial seal the day and year immediately above written.

[Signature]  
Notary Public

My Commission Expires:

**MIGALY LOPEZ**  
**NOTARY PUBLIC - STATE OF NEW YORK**  
**No. 01L06183181**  
**Qualified in Suffolk County**  
**Commission Expires March 10, 2012**

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EXECUTED under seal on this 13<sup>th</sup> day of AUGUST,

2009 at MANHASSET, N.Y.  
(Place)

Witness:

*Catherine S. Cash*

*Donald M. Grieco* (L.S.)  
Donald M. Grieco

State of NEW YORK

ss.

County of NASSAU

On this 13<sup>th</sup> day of AUGUST, 2009 before me personally appeared Donald M. Grieco, to me known to be the person described herein and who executed the foregoing instrument, and acknowledged that he executed the same knowingly and willingly and for the purposes therein contained.

Witness my hand and Notarial seal the day and year immediately above written.

*Steven Chudyk*  
Notary Public

My Commission Expires:

STEVEN CHUDYK  
Notary Public, State of New York  
No. 4759194  
Qualified in Suffolk County  
Commission Expires 12/31/2010

EXECUTED under seal on this 19 day of August,  
2009 at Melville, NY  
(Place)

Witness:

Bridgett Jeter

[Signature] (L.S.)  
Robert L. Olesen

State of New York  
County of Suffolk ss.

On this 19 day of August, 2009 before me personally appeared Robert L. Olesen, to me known to be the person described herein and who executed the foregoing instrument, and acknowledged that he executed the same knowingly and willingly and for the purposes therein contained.

Witness my hand and Notarial seal the day and year immediately above written.

[Signature]  
Notary Public

My Commission Expires:

**MAUREEN BORRERO**  
**Notary Public - State of New York**  
**No. 01BO6145147**  
**Qualified in Suffolk County**  
**Commission Expires May 1, 2010**