

Atty. Docket No. I-2-0290.1US

FORM PTO-1619A  
Expires 06/30/99  
OMB 0651-0027U.S. Department of Commerce  
Patent and Trademark Office  
**PATENT****RECORDATION FORM COVER SHEET  
PATENTS ONLY****TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).****Submission Type** New Resubmission (Non-Recordation)Document ID#  Correction of PTO ErrorReel # Frame #  Corrective DocumentReel # Frame # **Conveyance Type** Assignment Security Agreement License Change of Name Merger Other **U.S. Government**

(For Use ONLY by U.S. Government Agencies)

 Departmental File Secret File**Conveying Party(ies)** Mark if additional names of conveying parties attachedName (line 1) Execution Date  
Month Day Year  
Name (line 2) **Second Party**Name (line 1) Execution Date  
Month Day Year  
Name (line 2) **Receiving Party** Mark if additional names of receiving parties attachedName (line 1)  If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)Name (line 2) Address (line 1) Address (line 2) Address (line 3) 

City

State/Country

Zip Code

**Domestic Representative Name and Address**

Enter for the first Receiving Party only.

Name Address (line 1) Address (line 2) Address (line 3) Address (line 4) **FOR OFFICE USE ONLY**

Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB Information Collection Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

Mail documents to be recorded with required cover sheet(s) information to:  
Commissioner of Patents and Trademarks, Box Assignments, Washington, D.C. 20231**PATENT**

700027807

REEL: 13573 FRAME: 0184

FORM PTO-1619C  
Expires 06/30/99  
OMB 0651-0027

### RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

U.S. Department of Commerce  
Patent and Trademark Office  
**PATENT**

#### Conveying Party(ies)

Mark if additional names of conveying parties attached

Enter additional Conveying Parties

Execution Date  
Month Day Year

Name (line 1) CHAO, YI-JU

03202003

Name (line 2)

Execution Date  
Month Day Year

Name (line 1) RAHMAN, SHAMIM AKBAR

03142003

Name (line 2)

Execution Date  
Month Day Year

Name (line 1)

Name (line 2)

#### Receiving Party(ies)

Mark if additional names of receiving parties attached

Enter additional Receiving Party(ies)

Name (line 1)

If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3) City State/Country Zip Code

Name (line 1)

If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3) City State/Country Zip Code

#### Application Number(s) or Patent Number(s)

Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)



FORM PTO-1619B  
Expires 06/30/99  
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U.S. Department of Commerce  
Patent and Trademark Office  
**PATENT**

<b>Correspondent Name and Address</b>	<b>Area Code and Telephone Number</b>	(215) 568-6400
<b>Name</b>	C. FREDERICK KOENIG III	
<b>Address (line 1)</b>	VOLPE AND KOENIG, P.C.	
<b>Address (line 2)</b>	UNITED PLAZA, SUITE 1600	
<b>Address (line 3)</b>	30 SOUTH 17TH STREET	
<b>Address (line 4)</b>	PHILADELPHIA, PA 19103	

**Pages** Enter the total number of pages of the attached conveyance document including any attachments. # 5

**Application Number(s) or Patent Number(s)**  Mark if additional numbers attached  
Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)			Patent Number(s)		
10328791					

If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Month Day Year

**Patent Cooperation Treaty (PCT)**  
Enter PCT application number only if a U.S. Application Number has not been assigned.

PCT		PCT		PCT	
PCT		PCT		PCT	

**Number of Properties** Enter the total number of properties involved. # 1

**Fee Amount** Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00

Method of Payment: Enclosed  Deposit Account

(Enter for payment by deposit account or if additional fees can be charged to the account.)  
InterDigital Communications Corporation's Deposit Account Number: # 09-0435


Authorization to charge additional fees: Yes  No

**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. Charges to deposit account are authorized, as indicated herein.

C. FREDERICK KOENIG III

Name of Person Signing Reg. No. 29,662

 Signature

4/10/03 Date

**PATENT**  
REEL: 13573 FRAME: 0186

Atty. Docket No. I-2-0290.1US

**ASSIGNMENT**

Prabhakar R. Chitrapu, residing at 135 Brochant Drive, Blue Bell, Pa 19422, a citizen of the United States of America; Narayan Parappil Menon, residing at 81 Wilson Street, North Babylon, NY 11702, a citizen of India; Yi-Ju Chao, residing at 305 Maplewood Road, Huntington Station, NY 11746, a citizen of Taiwan; and Shamim Akbar Rahman, residing at 20 Deerfield Drive, Apt. 206, Ottawa, Ontario, K2G 4L2 Canada, a citizen of Canada (hereafter jointly and severally referred to as the undersigned), are the inventors of

**TDD-RLAN WIRELESS TELECOMMUNICATION SYSTEM****WITH RAN IP GATEWAY AND METHODS**

for which the undersigned have executed an application for United States Letters Patent, U.S. Patent Application No. 10/328,791 filed December 23, 2002.

The undersigned hereby authorize assignee or assignee's representative to insert the Application Number and the filing date of this application if they are unknown at the time of execution of this assignment.

InterDigital Technology Corporation, a corporation organized and existing under the laws of the State of Delaware and having its principal place of business at 300 Delaware Avenue, Suite 527, Wilmington, Delaware, (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

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 20<sup>th</sup> day of March, 2003  
at King of Prussia, PA  
(Place)

Witness:

Lucy Ann Maljevic

Prabhakar Chitrapu (L.S.)  
Prabhakar R. Chitrapu

State of PENNSYLVANIA

ss.

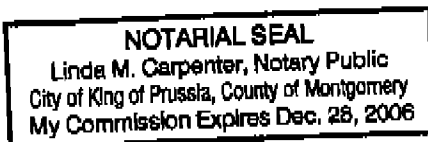
County of MONTGOMERY

On this 20<sup>th</sup> day of March, 2003 before me personally appeared Prabhakar R. Chitrapu, 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.

Linda M. Carpenter  
Notary Public

My Commission Expires:



EXECUTED under seal on this 20<sup>th</sup> day of March, 2003  
at Malverle, NY  
(Place)

Witness:

[Signature]

[Signature] (L.S.)  
Narayan Parappil Menon

State of New York

ss.

County of Suffolk

On this 20<sup>th</sup> day of March, 2003 before me personally appeared Narayan Parappil Menon, 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:

PATRICIA MCDONNELL  
NOTARY PUBLIC, STATE OF NEW YORK  
No. 5007034  
QUALIFIED IN SUFFOLK COUNTY  
TERM EXPIRES 1/19/07

EXECUTED under seal on this 20<sup>th</sup> day of March, 2003  
at Melville, NY  
(Place)

Witness:

[Signature]

[Signature] (L.S.)  
Yi-Ju Chao

State of New York  
County of Suffolk

ss.

On this 20<sup>th</sup> day of March, 2003 before me personally appeared Yi-Ju Chao, 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:

**PATRICIA MCDONNELL**  
**NOTARY PUBLIC, STATE OF NEW YORK**  
**No. 5007034**  
**QUALIFIED IN SUFFOLK COUNTY**  
**TERM EXPIRES 1/19/10**

EXECUTED under seal on this 14<sup>th</sup> day of March, 2003  
at Montreal  
(Place)

Witness:


Ilda Dabda

Shamim Akbar Rahman (L.S.)  
Shamim Akbar Rahman

State of Prov. of Quebec  
Canada ss.  
County of

On this 14<sup>th</sup> day of March, 2003 before me personally appeared Shamim Akbar Rahman, 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.

Celine Audet  
Notary Public  


My Commission Expires:  
Dec. 2, 2005