### 502301396 04/06/2013

#### PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### CONVEYING PARTY DATA

Name	Execution Date
Sheetal Kalyani	04/06/2013
Raghavendran Lakshminarayanan	04/06/2013

### **RECEIVING PARTY DATA**

Name:	CENTRE OF EXCELLENCE IN WIRELESS TECHNOLOGY
Street Address:	#152, CSD Building, IIT Madras Campus, Guindy
City:	Chennai
State/Country:	INDIA
Postal Code:	600036

#### PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13878213

#### CORRESPONDENCE DATA

Fax Number: 4432838430

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

Phone: 4432837000

Email: rahman@rahmanllc.com, martins@rahmanllc.com

Correspondent Name: Rahman LLC

Address Line 1: 10025 Governor Warfield Parkway

Address Line 2: Suite 212

Address Line 4: Columbia, MARYLAND 21044

ATTORNEY DOCKET NUMBER:	BL.1134
NAME OF SUBMITTER:	Mohammad S. Rahman
Signature:	/Mohammad S. Rahman/
Date:	04/06/2013

Total Attachments: 2

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PATENT REEL: 030164 FRAME: 0499 OF \$40.00 138/8213

## PATENT ASSIGNMENT

For and in consideration of good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor acknowledges his/her prior and ongoing obligation to sell, assign, and transfer, and agrees to sell, assign, and transfer the entire world wide right, title and interest for the United States and all foreign countries, in and to any and all inventions and improvements conceived during and within the scope of his/her employment, consultation, affiliation, etc., and further acknowledges that he/she has sold, assigned, and transferred, and hereby sells, assigns, and transfers, unto:

## CENTRE OF EXCELLENCE IN WIRELESS TECHNOLOGY #152, CSD Building, IIT Madras Campus, Guindy 600036 Chennai, India

a company of Chennai, India, and Centre of Excellence in Wireless Technology (hereinafter "the Assignee") desires to acquire all right, title, and interest, in and to the certain inventions identified below, patent applications, and any United States and foreign patents to be obtained therefor relating to:

# ROBUST CHANNEL ESTIMATION AND INTERPOLATION as set forth in the United States Patent Application executed by each undersigned inventor on the date indicated by each inventor signature below, and further identified by the attorney docket number referenced above; ☑ executed concurrently herewith <u>or</u> □ U.S. Application Serial No. filed on for and to said United States Patent Application including any and all divisions or continuations thereof and in and to any and all Letters Patent of the United States and foreign patents and all rights of priority to be obtained therefor which may issue on any such application or for said invention therein disclosed, including any and all reissues or extensions thereof, to be held and enjoyed by, its successors, legal representatives and assigns to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made. Each undersigned inventor hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all such Letters Patent to the Assignee, its successors and assigns, in accordance herewith. Each undersigned inventor warrants and covenants that he/she has the full and unencumbered right to sell and assign the interests hereby sold and assigned and that he/she has not executed and will not execute any document or instrument in conflict herewith. Each undersigned inventor further covenants and agrees that he/she, upon the request and at the expense of the Assignee, will execute and deliver any papers, make all rightful oaths, testify in any legal proceeding relating to said inventions and improvements, communicate to the Assignee all facts known to the undersigned relating to such inventions and improvements and the history thereof; and perform all other lawful acts deemed necessary or desirable by the Assignee, and its legal representatives, to secure, maintain, and enforce patent protection for such inventions and improvements and for vesting title to such inventions and improvements in the Assignee, and in particular to perfect title to said above-identified certain inventions, and applications including divisions and continuations thereof, and any and all Letters Patent which may be granted therefor or thereon, including reissues, extensions, or counterparts in the United States and worldwide. Each undersigned inventor hereby grants the Assignee and the practitioner(s) with authorized power of attorney to insert in this document any further identification which may be necessary or desirable for filing and/or recordation of this document. This assignment is governed by the substantive laws of Chennai, India. Name of Inventor: Sheetal Kalyani (1)

Signature: \_

Date: 04/06/2013

## **PATENT ASSIGNMENT**

For and in consideration of good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor acknowledges his/her prior and ongoing obligation to sell, assign, and transfer, and agrees to sell, assign, and transfer the entire world wide right, title and interest for the United States and all foreign countries, in and to any and all inventions and improvements conceived during and within the scope of his/her employment, consultation, affiliation, etc., and further acknowledges that he/she has sold, assigned, and transferred, and hereby sells, assigns, and transfers, unto:

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patents to be obtained therefor relating to.
ROBUST CHANNEL ESTIMATION AND INTERPOLATION
as set forth in the United States Patent Application executed by each undersigned inventor on the date indicated by
each inventor signature below, and further identified by the attorney docket number referenced above;
🛮 executed concurrently herewith or 🗆 U.S. Application Serial No filed on
for and to said United States Patent Application including any and all divisions or continuations thereof and in and
to any and all Letters Patent of the United States and foreign patents and all rights of priority to be obtained therefor
which may issue on any such application or for said invention therein disclosed, including any and all reissues or
extensions thereof, to be held and enjoyed by, its successors, legal representatives and assigns to the full end of the
term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held
and enjoyed by the undersigned had this Assignment not been made.
Each undersigned inventor hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any
and all such Letters Patent to the Assignee, its successors and assigns, in accordance herewith.
Each undersigned inventor warrants and covenants that he/she has the full and unencumbered right to sell and assign
the interests hereby sold and assigned and that he/she has not executed and will not execute any document or
instrument in conflict herewith.
Each undersigned inventor further covenants and agrees that he/she, upon the request and at the expense of the
Assignee, will execute and deliver any papers, make all rightful oaths, testify in any legal proceeding relating to said
inventions and improvements, communicate to the Assignee all facts known to the undersigned relating to such
inventions and improvements and the history thereof; and perform all other lawful acts deemed necessary or
desirable by the Assignee, and its legal representatives, to secure, maintain, and enforce patent protection for such
inventions and improvements and for vesting title to such inventions and improvements in the Assignee, and in
particular to perfect title to said above-identified certain inventions, and applications including divisions and
continuations thereof, and any and all Letters Patent which may be granted therefor or thereon, including reissues,
extensions, or counterparts in the United States and worldwide.
•
Each undersigned inventor hereby grants the Assignee and the practitioner(s) with authorized power of attorney to
insert in this document any further identification which may be necessary or desirable for filing and/or recordation
of this document.
This assignment is governed by the substantive laws of Chennai, India.
(2) Name of Inventor: Raghavendran Lakshminarayanan
(2) Name of inventor. Ragnavendran Laksimmarayanan
Signature: Date: D4/06/2013

Page 1 of 1

RECORDED: 04/06/2013