

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4916961

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the 1) DOC DATE FOR ASSIGNOR LI, NAN TO 02/02/2018, AND 2) ASSIGNEE ADDRESS TO ADD "ROUTE DE VILLEJUST" previously recorded on Reel 044855 Frame 0101. Assignor(s) hereby confirms the 1) DOC DATE FOR ASSIGNOR LI, NAN IS 02/02/2018, AND 2) ASSIGNEE ADDRESS TO ADD "ROUTE DE VILLEJUST".
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
XUN LI	02/05/2018
NAN LI	02/02/2018
MIN ZHANG	02/05/2018
TAO YANG	02/05/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ALCATEL LUCENT
<b>Street Address:</b>	SITE DE NOKIA PARIS-SACLAY
<b>Internal Address:</b>	ROUTE DE VILLEJUST
<b>City:</b>	NOZAY
<b>State/Country:</b>	FRANCE
<b>Postal Code:</b>	91620
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15750981
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(216)363-9001
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	2163639000
<b>Email:</b>	rgiuliani@faysharpe.com, ipsnarocp@nokia.com
<b>Correspondent Name:</b>	FAY SHARPE/LUCENT
<b>Address Line 1:</b>	1228 EUCLID AVENUE, 5TH FLOOR
<b>Address Line 4:</b>	CLEVELAND, OHIO 44115-1843
<b>ATTORNEY DOCKET NUMBER:</b>	818419/LUTZ 202266US01
<b>NAME OF SUBMITTER:</b>	JOSEPH D. DREHER
<b>SIGNATURE:</b>	/Joseph D. Dreher/

<b>DATE SIGNED:</b>	04/16/2018
<b>Total Attachments: 8</b> source=corrective_assignment_papers#page1.tif source=corrective_assignment_papers#page2.tif source=corrective_assignment_papers#page3.tif source=corrective_assignment_papers#page4.tif source=corrective_assignment_papers#page5.tif source=corrective_assignment_papers#page6.tif source=corrective_assignment_papers#page7.tif source=corrective_assignment_papers#page8.tif	

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
XUN LI	02/05/2018
NAN LI	02/05/2018
MIN ZHANG	02/05/2018
TAO YANG	02/05/2018
RECEIVING PARTY DATA	
Name:	ALCATEL LUCENT
Street Address:	SITE DE NOKIA PARIS-SACLAY
City:	NOZAY
State/Country:	FRANCE
Postal Code:	91620
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15750981
CORRESPONDENCE DATA	
Fax Number:	(216)363-9001
Phone:	216.363.9000
Email:	rgiuliani@faysharpe.com, ipsnarocp@nokia.com
Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.	
Correspondent Name:	FAY SHARPE/LUCENT
Address Line 1:	1228 EUCLID AVENUE, 5TH FLOOR
Address Line 2:	THE HALLE BUILDING
Address Line 4:	CLEVELAND, OHIO 44115-1843
ATTORNEY DOCKET NUMBER:	LUTZ 202266US01
NAME OF SUBMITTER:	JOSEPH D. DREHER

<b>Signature:</b>	/Joseph D. Dreher/
<b>Date:</b>	02/07/2018
<b>Total Attachments: 4</b> source=assignment#page1.tif source=assignment#page2.tif source=assignment#page3.tif source=assignment#page4.tif	
<b>RECEIPT INFORMATION</b>  <b>EPAS ID:</b> PAT4813983 <b>Receipt Date:</b> 02/07/2018	

PATENT

REEL: 045952 FRAME: 0523

2/7/2018, 2:48 PM

# ASSIGNMENT

818419-US-PCT

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

Method And Apparatus For Short-Term Feedback In Multi-Input Multi-Output Communications

for which Assignor is about to make or has made United States or International application for patent

- (a) ☐ executed on even date preparatory to filing (each inventor should sign this Assignment on the same day as he/she signs the Declaration and Power of Attorney);
- (b) ☐ executed on \_\_\_\_\_, or
- (c) ☒ filed on July 12, 2016, and assigned Serial No. \_\_\_\_\_ or PCT International Application No. PCT/IB2016/001152; and

WHEREAS, Alcatel Lucent, Site de Nokia Paris-Saclay - Route de Villejust - 91620 NOZAY - FRANCE, hereinafter referred to as Assignee, is desirous of acquiring all right, title, and interest therein:

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy whereof is hereby acknowledged, Assignor agrees to, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the invention as described in the aforesaid application and all United States Letters Patent which may be granted therefore, and all divisions, continuations, reissues, reexaminations and extensions thereof, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications or patents resulting therefrom;

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or Inventor's Certificate to Assignee.

The undersigned hereby grant(s) the law firm of Fay Sharpe, LLP the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

# ASSIGNMENT

818419-US-PCT

Inventor: Xun Li

Signature: Xun Li Date: 2018.2.5

Inventor: Nan Li

Signature: Nan Li Date: 2018.2.2

Inventor: Min ZHANG

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Inventor: Tao YANG

Signature: Tao Yang Date: 2018.2.5