504767255 02/07/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT		
CONVEYING PARTY D	ΑΤΑ				
		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 DA	TA				
Name:	ALCAT	EL LUCENT			
Street Address:	SITE D	E NOKIA PARIS-SACLAY			
City:	NOZAY	,			
State/Country:	FRANC	E			
Postal Code:	91620				
PROPERTY NUMBERS	Total: 1				
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Property Type		Number			
Property Type Application Number:		Number 15750981			
Application Number:					
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Application Number: CORRESPONDENCE D Fax Number: Correspondence will be using a fax number, if p Phone:	ATA e sent to provided	15750981 (216)363-9001 5 the e-mail address first; if that is uns 1; if that is unsuccessful, it will be sen 216.363.9000	t via US Mail.		
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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) A 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.

Page 1 of 2

PATENT REEL: 044855 FRAME: 0103

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Signature:	Date: <u>2018. 2.5</u>
Inventor: Nan LI Signature:N avi Li	Date: 2018, 2. 2
Inventor: Min ZHANG Signature:	Date:
Inventor: Tao YANG Signature:	Date: <u><u>)</u></u>

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) A filed on <u>July 12, 2016</u>, and assigned Serial No. or PCT International Application No. <u>PCT/IB2016/001152</u>; 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.

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Page 1 of 2

PATENT REEL: 044855 FRAME: 0105

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Inventor: Xun Li	
Signature:	_ Date:
Inventor: Nan LI	
Signature:	_ Date:
Inventor: Min ZHANG	
Signature:	Date: 05/02/2018
Inventor: Tao YANG	
Signature:	Date:

Page 2 of 2

PATENT REEL: 044855 FRAME: 0106

RECORDED: 02/07/2018

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