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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PAUL SHALA HENRY	06/18/2015
ROBERT BENNETT	06/18/2015
FARHAD BARZEGAR	06/17/2015
IRWIN GERSZBERG	06/17/2015
DONALD J. BARNICKEL	06/22/2015
THOMAS M. WILLIS III	06/17/2015

RECEIVING PARTY DATA

Name:	AT&T INTELLECTUAL PROPERTY I, L.P.
Street Address:	675 W. PEACHTREE STREET
Internal Address:	SUITE 4000
City:	ATLANTA
State/Country:	GEORGIA
Postal Code:	30308

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16375314

CORRESPONDENCE DATA

Fax Number: (847)510-0710

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.

Email: docketing@ggip.com

Correspondent Name: AT&T LEGAL DEPARTMENT - GG ATTN: PATENT

Address Line 1: ROOM 2A-207
Address Line 2: ONE AT&T WAY

Address Line 4: BEDMINSTER, NEW JERSEY 07921

ATTORNEY DOCKET NUMBER:	7785-1168-03
NAME OF SUBMITTER:	JENNIFER SWANSON
SIGNATURE:	/Jennifer Swanson/
DATE SIGNED:	04/18/2019

PATENT REEL: 048931 FRAME: 0090

Total Attachments: 8 source=7785-1168 Signed Assignment#page1.tif source=7785-1168 Signed Assignment#page2.tif source=7785-1168 Signed Assignment#page3.tif source=7785-1168 Signed Assignment#page4.tif source=7785-1168 Signed Assignment#page5.tif source=7785-1168 Signed Assignment#page6.tif source=7785-1168 Signed Assignment#page7.tif source=7785-1168 Signed Assignment#page7.tif source=7785-1168 Signed Assignment#page8.tif

PATENT REEL: 048931 FRAME: 0091

ASSIGNMENT

WHEREAS We, **PAUL SHALA HENRY**, residing at 7 Crow Field Lane, Holmdel, NJ 07733, and **ROBERT BENNETT**, residing at 1540 North Bayview Rd EXT, Southold, NY 11971, and **FARHAD BARZEGAR**, residing at 14 FARRINGTON LANE, BRANCHBURG, NJ 08876, and **IRWIN GERSZBERG**, residing at 12 Dickinson Road, Kendall Park, NJ 08824, and **DONALD J BARNICKEL**, residing at 3 Wells Road, Flemington, NJ 08822, and **THOMAS M. WILLIS III**, residing at 10 Beverly Court, Tinton Falls, NJ 07724, hereinafter referred to as Assignor, am listed as an inventor on a patent application entitled METHODS AND APPARATUS FOR INDUCING A NON-FUNDAMENTAL WAVE MODE ON A TRANSMISSION MEDIUM; having AT&T Docket No. 2015-0194, the patent application to be filed in the United States Patent & Trademark Office; and

WHEREAS, AT&T INTELLECTUAL PROPERTY I, LP, a Partnership organized and existing under the laws of Nevada and having an address at 675 W. Peachtree Street, Suite 4000, Atlanta, GA 30308, (hereinafter referred to as Assignee), desires to acquire the entire right, title and interest for the United States of America and elsewhere throughout the world in and to said invention and the patent application identified above, including any and all divisions and continuations thereof and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues and prolongations thereto;

NOW THEREFORE, be it known that for and in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I, as Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my entire right, title, and interest in and to this invention and this non-provisional application, and all divisions, substitutions, and continuations thereof; and all Letters Patent of the United States which may be granted thereon, and all reexaminations and reissues thereof; and all rights to claim priority on the basis of the above provisional application (if any), as well as all rights to claim priority on the basis of this application; and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, including certificates of inventions, utility models, industrial design protection, design patent protection, and other governmental grants or issuances; and all extensions, renewals, prolongations, and reissues thereof; to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term and terms for all such patents;

AND, I HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any assignment, sale, license, agreement, or encumbrance in conflict with this Assignment;

AND, I HEREBY further covenant and agree, for the Assignor and the Assignor's legal representatives, that I will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to us respecting this invention; assist the Assignee in the prosecution of the patent application identified above; assist in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; testify in any interference, litigation, or other legal proceeding; sign all lawful papers when called upon to do so; execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns; execute all divisional, continuation, and reissue applications; make all rightful oaths and generally do everything possible to aid Assignee, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee; and hereby instruct, and further covenant and agree to bind our heirs, legal representatives, and assigns, to do same, without compensation, but at the expense of Assignee or its representatives.

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AND, I HEREBY consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of AT&T INTELLECTUAL PROPERTY I, LP to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

This Assignment may be executed in any number of counterparts, each of which when so executed and delivered shall be deemed an original, and such counterparts together shall constitute one and the same instrument. A facsimile copy of this Assignment, or any form of an electronic copy of this Assignment, including the signature pages hereto, shall be deemed to be an original.

IN TESTIMONY WHEREOF, I h	ave hereunto set m	y hand this 18		, 2015.
State of New Tersey County of Monmoustin)			
On this 18th day of				
for the above County and State, pe	rsonally appeared		efore me a Notary Pi	
Hael Shala He assignment as his/her free act and o	•			ne foregoing
Valerie Schumae Notary Public	My Commission		21/200	
· · · · · · · · · · · · · · · · · · ·	wry Commission	Expires:	CIT LOTA	

VALERIE SCHUMACHER NOTARY PUBLIC OF NEW JERSEY ID # 50004989 My Commission Expires 10/21/2019

IN TESTIMONY WHEREOF, I hav	ROBERT BENNETT
N. T	
State of New every	
State of New Jersey) County of Monmouth)	
On this 18th day of	Ure 2015, before me a Notary Public in and
for the above County and State, perso	nally appeared
Robert Bennett	, and acknowledged the execution of the foregoing
assignment as his/her free act and dee	d for the purpose herein set forth.
Valerie Schumack	
Notary Public N	1y Commission Expires: $10/21/2019$
	VALERIE SCHUMACHER NOTARY PUBLIC OF NEW JERSEY

ID # 50004989 My Commission Expires 10/21/2019

IN TESTIMONY WHEREOF, I have hereunto set my hand this 17 day of June . 2015. [In Mad Daylet 2015]
State of New Tersey) County of Monmouth
On this 17th day of June . 2015, before me a Notary Public in and for the above County and State, personally appeared
Farhael Barzegar, and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose herein set forth.
Notary Public My Commission Expires: 10/21/20, 9
VALERIE SCHUMACHER

NOTARY PUBLIC OF NEW JERSEY
1D # 50004989
My Commission Expires 10/21/2019

IN TESTIMONY WHEREOF, I have hereunto set my hand this 17 day of June, 2015.
/_
IRWIN GERSZBERG
State of New Tersey) County of Monmowth
County of Mannewan_)
On this 17th day of June . 2015, before me a Notary Public in and
for the above County and State, personally appeared
In Gerzberg, and acknowledged the execution of the foregoing
assignment as his/her free act and deed for the purpose herein set forth.
Calerie Schumach
Notary Public My Commission Expires: 10/21/2013
VALERIE SCHUMACHER

NOTARY PUBLIC OF NEW JERSEY ID # 50004989 My Commission Expires 10/21/2019

IN TESTIMONY WHEREOF I have because set my bond this 2.7. 4. 6. 1444.7.
IN TESTIMONY WHEREOF. I have hereunto set my hand this 22 day of JUNE, 2015. Com/A Barric God DONALD J BARNICKEL
State of New Jersey)
County of Monmowth)
On this ZZ day of JUNE . 2015, before me a Notary Public in and
for the above County and State, personally appeared
Donald J. Barnickel, and acknowledged the execution of the foregoing
assignment as his/her free act and deed for the purpose herein set forth.
Deeply zamy
Notary Public My Commission Expires: 2/23/2020
DOROTHY ZARSKY Notary Public State of New Jersey My Commission Evolves Set 23, 2020

IN TESTIMONY WHEREOF, I have hereunto set my hand this 17 day of June . 2015. Whomes W Willis III
State of New Jersey) County of Monmouth
County of Monmouth
On this May of June, 2015, before me a Notary Public in and
for the above County and State, personally appeared
Thomas H. Willis TH , and acknowledged the execution of the foregoing
assignment as his/her free act and deed for the purpose herein set forth.
Valerie Shemael
Notary Public My Commission Expires: 10/21/2a1G

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