#### 506651594 05/07/2021

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT6698405

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
RAJARAJAN SIVARAJ	12/11/2018
VARUN GUPTA	12/13/2018
DHRUV GUPTA	12/11/2018
RITTWIK JANA	12/13/2018
JIN WANG	12/11/2018
LAURIE BIGLER	12/11/2018
WEIHUA YE	12/14/2018
ZHENGYE LIU	12/15/2018

#### RECEIVING PARTY DATA

Name:	AT&T INTELLECTUAL PROPERTY I, L.P.
Street Address:	754 PEACHTREE ST. NE
Internal Address:	SUITE 7C
City:	ATLANTA
State/Country:	GEORGIA
Postal Code:	30308

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	17314552

#### **CORRESPONDENCE DATA**

Fax Number: (216)696-8731

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.

Phone: 2166968730

Email: EPAS@thepatentattorneys.com

AT&T LEGAL DEPARTMENT - AT&W ATTN: PATENT DOCKETIN Correspondent Name:

Address Line 1: ONE AT&T WAY Address Line 2: **ROOM 2A 212** 

Address Line 4: BEDMINSTER, NEW JERSEY 07921

ATTORNEY DOCKET NUMBER:	2018-0730CON/ATTWP1109USA
NAME OF SUBMITTER:	THOMAS E. WATSON

SIGNATURE:	/Thomas E. Watson/
DATE SIGNED:	05/07/2021
Total Attachments: 18	
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WHEREAS I, Rajarajan Sivaraj residing at 4750 Tassajara Road, Apt 5204, Dublin, CA
94568, hereafter referred to as Assignor, am listed as an inventor on a patent application entitled
"LATENCY PREDICTION AND GUIDANCE IN WIRELESS COMMUNICATION
SYSTEMS," having AT&T Docket No. 2018-0730, the patent application to be filed in the United
States Patent & Trademark Office or which was filed as U.S. Patent Application Serial No
on; and

WHEREAS, **AT&T INTELLECTUAL PROPERTY I, L.P.**, 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

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WHEREAS I, Varun Gupta residing at 76 Wildflower Lane, Morristown, NJ 07960, San
Ramon, CA 94583, hereafter referred to as Assignor, am listed as an inventor on a patent application
entitled "LATENCY PREDICTION AND GUIDANCE IN WIRELESS
COMMUNICATION SYSTEMS," having AT&T Docket No. 2018-0730, the patent application to
be filed in the United States Patent & Trademark Office or which was filed as U.S. Patent Application
Serial No on; and

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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 Assignce; 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 Assignce or its representatives.

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, L.P. 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.

I hereby authorize and request Amin, Turocy & Watson, LLP to insert the filing date and application number of said application when known.

IN TESTIMO	NY WHEREOF, I have hereunto set my hand this <u>[34</u> 4day of <u>Descert</u> s	)
2018.	Varian hydron	
	Varun Gupta	
State of <u>Xew</u>	(1218) 1285) <u>1285)</u> , 20/1 before me a Notary Public in and for the above County	
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and State, personally a	25 25 12 2	ŕ
AAAAAAA Notary Public	CAROLE A. TERANTINO  My Commission Expires: Comm. W 2428669  A Commission Expires (1000)	

Page 2 of 2

WHEREAS I, Dhruv Gupta residing at 3245 Veracruz Dr., San Ramon, CA 94583, here	after
referred to as Assignor, am listed as an inventor on a patent application entitled "LATENCY	
PREDICTION AND GUIDANCE IN WIRELESS COMMUNICATION SYSTEMS,"	
having AT&T Docket No. 2018-0730, the patent application to be filed in the United States Patent &	Z
Trademark Office or which was filed as U.S. Patent Application Serial No on -	
; and	

WHEREAS, **AT&T INTELLECTUAL PROPERTY I, L.P.**, 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;

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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;

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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

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	WHEREAS I, Rittwik Janu residing at 1 Peachtree Drive, Montville,	NJ 07045,	hereafter
referre	d to as Assignor, am listed as an inventor on a patent application entitled '	LATEN	CY
PRED	DICTION AND GUIDANCE IN WIRELESS COMMUNICATION	ON SYST	EMS,"
having	AT&T Docket No. 2018-0730, the patent application to be filed in the Ur	nited States	Patent &
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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.

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, L.P. 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.

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IN TESTIMONY 2018.	( WHEREOF, I have bereue	to set my hand this <u>Li</u>	
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<u>Casals (i. )</u> Notary Public	加み足動 My Commission Expires:	CAROLE A. TERV OTARY PUBLIC OF NE COMMINITY 242	

Page 2 of 2

Commission Expires 1/10/2023

WHEREAS I, Jin Wang residing at 2033 Parkmeadow Pl, Fremont, CA 94539, hereafter
referred to as Assignor, am listed as an inventor on a patent application entitled "LATENCY
PREDICTION AND GUIDANCE IN WIRELESS COMMUNICATION SYSTEMS,"
having AT&T Docket No. 2018-0730, the patent application to be filed in the United States Patent &
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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;

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Page 2 of 2

WHEREAS I, Laurie Bigler residing at 330 Denise Lane, Lafayette, CA 94549, hereaf	fter
referred to as Assignor, am listed as an inventor on a patent application entitled "LATENCY	
PREDICTION AND GUIDANCE IN WIRELESS COMMUNICATION SYSTEMS	,,,
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# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

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WHEREAS I, Weihua Ye residing at 1140 N Wells St Unit 701, Chicago, IL 60610, herea	fteı
referred to as Assignor, am listed as an inventor on a patent application entitled "LATENCY	
PREDICTION AND GUIDANCE IN WIRELESS COMMUNICATION SYSTEMS,"	
having AT&T Docket No. 2018-0730, the patent application to be filed in the United States Patent &	
Trademark Office or which was filed as U.S. Patent Application Serial No on -	
; and	

WHEREAS, **AT&T INTELLECTUAL PROPERTY I, L.P.**, 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, if being understood that any expense incident to the execution of such papers shall be borne by the Assignce, and bereby instruct, and further covenant and agree to bind our heirs, legal representatives, and assigns, to do same, without compensation, but at the expense of Assignce or its representatives.

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, L,P, 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.

Thereby authorize and request Amin, Turocy & Watson, LLP to insert the filing date and application number of said application when known.

IN TESTIMONY WHEREOF, I have hereunto set my hand this way of Percenter Weihua Ye

State of Alive's

On this Alive's and State, personally appeared Weiker and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose hereiniset forth.

My Commission Expires: 12 05 - 2021

Page 2 of 2

OFFICIAL SEAL
CLAYTON THORN
NOTARY PUBLIC STATE OF ILLINOIS
My Commission Expires 12-08-2021

WHEREAS I, Zhengye Liu residing at 4320 Fairlands Drive, Pleasanton, CA 94588, hereaf	ter
referred to as Assignor, am listed as an inventor on a patent application entitled "LATENCY	
PREDICTION AND GUIDANCE IN WIRELESS COMMUNICATION SYSTEMS,"	
having AT&T Docket No. 2018-0730, the patent application to be filed in the United States Patent &	
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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;

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to this invention in the United States and any foreign country at being understood that any expensionable to the execution of such papers shall be borne by the Assignes and hereby method, and forther concernant and agree to rind our term, legal representances, and assume to do sane without compensations but at the expense of Assignes or its representances.

AND LEEREBY consent that a copy of this assignment shall be deemed a full legal and formal convoluent of any deciment which may be required in any country in proof of the right of AT&T INTELEMENTAL PROPERTY L.L.P. to apply for patent or other form of protection for said recentions and its claim the aforesaid benefit of the right of private.

This Assignment may be executed in any number of counterparts, each of which when so executes and delivered shall be deemed an original, and such counterparts together shall constitute use and the same materials. A factorise copy of this Assignment, or any form of an electronic copy of this Assignment, and form of an electronic copy of this Assignment, and the deemed to be an original.

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IN TESTIMONY WHERE 2018	SOF. I have hereunto set my hand this / \$\frac{1}{2}\day of \frac{\frac{1}{2}\lambda \lambda \lambda \frac{1}{2}}{2\lambda \frac{1}{2}\lambda \fra
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## ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who aigned the document to which the certificate is attached, and not the instifutness, accuracy validity of that document

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who proved to me on the basis of-satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in this/her/their authorized capacity(es), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct

WITNESS my hand and official seal.

Signature

(Seal)

MALLORI GUIDRY

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