

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
SUBHABRATA SEN	11/14/2018
SHICHANG XU	09/11/2019
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:	16191116
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ATTORNEY DOCKET NUMBER:	7785-1883
NAME OF SUBMITTER:	JILL R. HOLMAN
SIGNATURE:	/JILL R. HOLMAN/
DATE SIGNED:	09/12/2019
Total Attachments: 4	
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source=7785-1883 Signed Assignment#page4.tif	

ASSIGNMENT

WHEREAS We, **SUBHABRATA SEN**, residing at 800 Forest Avenue, Apt. 10G, Westfield, NJ 07090, and **SHICHANG XU**, residing at 1229 McIntyre Street, Ann Arbor, MI 48105, hereinafter referred to as Assignor, am listed as an inventor on a patent application entitled **METHOD AND APPARATUS FOR INFERRING ABR VIDEO STREAMING BEHAVIOR FROM ENCRYPTED TRAFFIC**; having AT&T Docket No. 2018-0654, US Patent Application Serial no. 16/191,116, for a full description of which reference is here made to an application for Letters Patent of the United States; 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; Assignor also authorizes the Assignee, any agent of the Assignee, and any attorney of the Assignee to fill in the U.S. Application Serial No. above, and any further identification information, if required;

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.

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.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 14th day of November, 2018.

Subhabrata Sen
SUBHABRATA SEN

State of New Jersey
County of Somerset

On this NOV 14 day of 2018, 2018, before me a Notary Public in and

for the above County and State, personally appeared
SUBHABRATA SEN, and acknowledged the execution of the foregoing
assignment as his/her free act and deed for the purpose herein set forth.

Richard Seto Yee
Notary Public

RICHARD SETO YEE
NOTARY PUBLIC
SOMERSET COUNTY, NEW JERSEY
ID # 2439861
MY COMMISSION EXPIRES OCTOBER 22, 2023

IN TESTIMONY WHEREOF, I have hereunto set my hand this 11th day of September, 2019.

Shichang Xu
SHICHANG XU

State of MICHIGAN)

County of WASHTENAW)

On this 11th day of September, 2019, before me a Notary Public in and

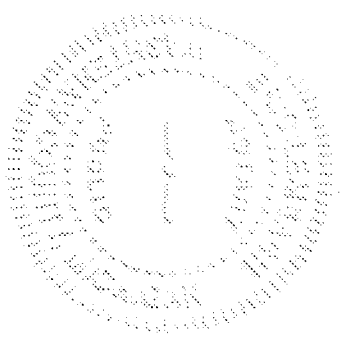
for the above County and State, personally appeared

Shichang Xu, and acknowledged the execution of the foregoing

assignment as his/her free act and deed for the purpose herein set forth.

Eric Lembach
Notary Public

My Commission Expires: June 3, 2024



ERIC LEMBACH
NOTARY PUBLIC, STATE OF MI
COUNTY OF WASHTENAW
MY COMMISSION EXPIRES Jun 3, 2024
ACTING IN COUNTY OF