**PATENT ASSIGNMENT COVER SHEET**

**SUBMISSION TYPE:** NEW ASSIGNMENT  
**NATURE OF CONVEYANCE:** ASSIGNMENT

**CONVEYING PARTY DATA**

<table>
<thead>
<tr>
<th>Name</th>
<th>Execution Date</th>
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<tbody>
<tr>
<td>KEN LIU</td>
<td>11/29/2016</td>
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<tr>
<td>FARHAD BARZEGAR</td>
<td>11/30/2016</td>
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<tr>
<td>IRWIN GERSZBERG</td>
<td>11/30/2016</td>
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<tr>
<td>PAMELA A. M. BOGDAN</td>
<td>12/01/2016</td>
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<tr>
<td>DONALD J. BARNICKEL</td>
<td>12/03/2016</td>
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<tr>
<td>BRANDON PIMM</td>
<td>11/30/2016</td>
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<tr>
<td>THOMAS M. WILLIS III</td>
<td>11/30/2016</td>
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<tr>
<td>DAVID M. BRITZ</td>
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<tr>
<td>PAUL SHALA HENRY</td>
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<td>ROBERT BENNETT</td>
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<tr>
<td>DOROTHY ZARSKY</td>
<td>11/30/2016</td>
</tr>
<tr>
<td>JAMES GORDON BEATTIE JR.</td>
<td>11/30/2016</td>
</tr>
</tbody>
</table>

**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**

<table>
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<tr>
<th>Property Type</th>
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<tr>
<td>Application Number:</td>
<td>15371323</td>
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**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
<table>
<thead>
<tr>
<th><strong>ATTORNEY DOCKET NUMBER:</strong></th>
<th>7785-1528</th>
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<tbody>
<tr>
<td><strong>NAME OF SUBMITTER:</strong></td>
<td>ED GUNTIN</td>
</tr>
<tr>
<td><strong>SIGNATURE:</strong></td>
<td>/Ed Guntin/</td>
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<td><strong>DATE SIGNED:</strong></td>
<td>01/25/2017</td>
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Total Attachments: 14

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- source=7785-1528_SIGNED_ASSIGNMENT#page14.tif
ASSIGNMENT

WHEREAS We, KEN LIU, residing at 1087 New Dover Road, Edison, NJ 08820, and FARHAD BARZEGAR, residing at 14 Farrington Lane, Branchburg, NJ 08876, and IRWIN GERSZBERG, residing at 12 Dickinson Road, Kendall Park, NJ 08824, and PAMELA A. M. BOGDAN, residing at 7 Hampton Court, Neptune, NJ 07753, and DONALD J. BARNICHEL, residing at 3 Wells Road, Flemington, NJ 08822, and BRANDON PIMM, residing at 6 Merion Dr, Malatapean, NJ 07726, and THOMAS M. WILLIS III, residing at 10 Beverly Court, Tinton Falls, NJ 07724, and DAVID M. BRITZ, residing at 14 Robin Road, Rumson, NJ 07760, and PAUL SIALA HENRY, residing at 7 Cow Field Lane, Holmdel, NJ 07733, and ROBERT BENNETT, residing at 1540 North Bayview Rd EXT, Southold, NY 11971, and DOROTHY ZARSKY, residing at 28 Club Lane, Summit, NJ 07901, and JAMES GORDON BEATTIE JR., residing at 206 N. Vivion Street, Bergenfield, NJ 07621, hereinafter referred to as Assignor, am listed as an inventor on a patent application entitled METHOD AND APPARATUS FOR DEPLOYING EQUIPMENT OF A COMMUNICATION SYSTEM; having AT&T Docket No. 2016-0772, US Patent Application Serial no. 15/371,323, 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 to 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 29th day of November, 2016.

KEN LUI

State of New Jersey
County of Monmouth

On this 29th day of November, 2016, before me a Notary Public in and for the above County and State, personally appeared

KEN LUI, and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose herein set forth.

NANCY A. HENDERSON
NOTARY PUBLIC OF NEW JERSEY
I.D. # 50027401
My Commission Expires 12/1/2020

Page 3 of 14
IN TESTIMONY WHEREOF, I have hereunto set my hand this 30th day of November, 2016.

FARHAD BARZEGAR

State of New Jersey
County of Monmouth

On this 30 day of November, 2016, before me a Notary Public in and for the above County and State, personally appeared

FARHAD BARZEGAR, and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose herein set forth.

NANCY A. HENDERSON
NOTARY PUBLIC OF NEW JERSEY
I.D. # 50027401
My Commission Expires: 12/1/2020
IN TESTIMONY WHEREOF, I have hereunto set my hand this 3rd day of Nov., 2016.

IRWIN GERSZBERG

State of New Jersey
County of Monmouth

On this 30th day of November, 2016, before me a Notary Public in and for the above County and State, personally appeared

IRWIN GERSZBERG, and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose herein set forth.

NANCY A. HENDERSON
NOTARY PUBLIC OF NEW JERSEY
I.D. # 50027401
My Commission Expires 12/1/2020

Page 5 of 14
IN TESTIMONY WHEREOF, I have hereunto set my hand this 1 day of December, 2016.

PAMELA A. M. BOGDAN

State of New Jersey
County of Monmouth

On this 1 day of December, 2016, before me a Notary Public in and for the above County and State, personally appeared Pamela A. M. Bogdan, and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose herein set forth.

NANCY A. HENDERSON
NOTARY PUBLIC OF NEW JERSEY
I.D. # 50027401
My Commission Expires 12/1/2020

Page 6 of 14
IN TESTIMONY WHEREOF, I have hereunto set my hand this 3rd day of December, 2016.

DONALD J. BARNICKEL

State of NEW JERSEY
County of HUNTERDON

On this 3rd day of DECEMBER, 2016, 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.

ANITA WEINGART
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 7/19/2017

Notary Public
IN TESTIMONY WHEREOF, I have hereunto set my hand this 30 day of November, 2016.

Brandon Pimm

State of New Jersey
County of Monmouth

On this 30 day of November, 2016, before me a Notary Public in and for the above County and State, personally appeared Brandon Pimm, and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose herein set forth.

Nancy A. Henderson
Notary Public
My Commission Expires: 12/1/2020

NANCY A. HENDERSON
NOTARY PUBLIC OF NEW JERSEY
I.D. # 50027401
IN TESTIMONY WHEREOF, I have hereunto set my hand this 30th day of November, 2016.

THOMAS M. WILLIS III

State of New Jersey

County of Monmouth

On this 30th day of November, 2016, before me a Notary Public in and for the above County and State, personally appeared

Thomas M. Willis III, and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose herein set forth.

Nancy A. Henderson
Notary Public

My Commission Expires: My Commission Expires 12/1/2020
IN TESTIMONY WHEREOF, I have hereunto set my hand this 30 day of November, 2016.

DAVID M. BRITZ

State of New Jersey
County of Monmouth

On this 30 day of November, 2016, before me a Notary Public in and for the above County and State, personally appeared

David M. Britz, and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose herein set forth.

Nancy A. Henderson
Notary Public

My Commission Expires: 12/1/2020

NANCY A. HENDERSON
NOTARY PUBLIC OF NEW JERSEY
I.D. # 50027401
IN TESTIMONY WHEREOF, I have hereunto set my hand this 30th day of Nov____., 2016.

PAUL SHALA HENRY

State of New Jersey
County of Monmouth

On this 20 day of November, 2016, before me a Notary Public in and

for the above County and State, personally appeared

Paul Shala Henry, and acknowledged the execution of the foregoing

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

Nancy A. Henderson
Notary Public

My Commission Expire: 12/1/2020

NANCY A. HENDERSON
NOTARY PUBLIC OF NEW JERSEY
I.D. # 50027401
IN TESTIMONY WHEREOF, I have hereunto set my hand this 30 day of Nov., 2016.

ROBERT BENNETT

State of New Jersey
County of Monmouth

On this 30 day of November, 2016, before me a Notary Public in and for the above County and State, personally appeared

Robert Bennett, and acknowledged the execution of the foregoing
assignment as his/her free act and deed for the purpose herein set forth.

Nancy A. Henderson
Notary Public

My Commission Expires: 12/1/2020
IN TESTIMONY WHEREOF, I have hereunto set my hand this 30 day of November, 2016.

DOROTHY ZARSKY

State of New Jersey
County of Monmouth

On this 30 day of November, 2016, before me a Notary Public in and for the above County and State, personally appeared

DOROTHY ZARSKY, and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose herein set forth.

NANCY A. HENDERSON
NOTARY PUBLIC OF NEW JERSEY
I.D. # 50027401
My Commission Expires 12/1/2020

Page 13 of 14

PATENT
REEL: 041078 FRAME: 0089
IN TESTIMONY WHEREOF, I have hereunto set my hand this 30 day of NOV, 2016.

JAMES GORDON BEATTIE JR.

State of VS, __________
County of SACRAMENTO

On this 30 day of NOV, 2016, before me a Notary Public in and for the above County and State, personally appeared

JAMES GORDON BEATTIE JR., and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose herein set forth.

Joan M. Sommers
Notary Public

My Commission Expires: __________

JOAN M. SOMMERS
COMMISSION EXPIRES
MAY 7 2021