502149428 12/04/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Srikanth Hariharan	11/29/2012
Ernest Tsui	11/29/2012
Christopher M. Riley	11/29/2012
Bo Ji	11/29/2012
Xiaojun Tang	12/03/2012

RECEIVING PARTY DATA

Name:	AT&T Intellectual Property I, L.P.	
Street Address:	675 W. Peachtree Street, Suite 4000	
City:	Atlanta	
State/Country:	GEORGIA	
Postal Code:	30375	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	13693271	

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 404-927-2780

epas@thepatentattorneys.com Email:

AT&T Legal Department - T&W Attn: Paten Correspondent Name:

Address Line 1: Room 2A-207 Address Line 2: One AT&T Way

Address Line 4: Bedminster, NEW JERSEY 07921

ATTORNEY DOCKET NUMBER:	2012-0920/ATTWP603US	
NAME OF SUBMITTER:	Thomas E. Watson	
	PATENT	

REEL: 029400 FRAME: 0287

Total Attachments: 10
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WHEREAS I, Srikanth Hariharan residing at 2739 PROMONTORY CIRCLE, SAN RAMON, CA 94583, hereafter referred to as Assignor, am listed as an inventor on a patent application entitled "DIAGNOSIS OF CELLULAR NETWORK ELEMENT STATES USING RADIO FREQUENCY MEASUREMENTS," having AT&T Docket No. 2012-0920, the patent application to be filed in the United States Patent & Trademark Office; 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 30375 (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

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 29	day of November,
20_12.	H-Sirkanth	
	Srikanth Hariharan	
State of Attornia)		
County of Alauro A		
On this day of November, 20/2 and State, personally appeared and achis/her free act and deed for the purpose herein	, before me a Notary Public in an knowledged the execution of the n set forth.	nd for the above County foregoing assignment as
Sandy Ahaffin	<i>u</i> / 0	
Notary Public () My Commission Exp	ires: 1 pw - 21-20.	14
	/ 1/	*****

Page 2 of 2

WHEREAS I, Ernest Tsui residing at 9663 CROSBY DRIVE, PLEASANTON, CA 94588, hereafter referred to as Assignor, am listed as an inventor on a patent application entitled "DIAGNOSIS OF CELLULAR NETWORK ELEMENT STATES USING RADIO FREQUENCY MEASUREMENTS," having AT&T Docket No. 2012-0920, the patent application to be filed in the United States Patent & Trademark Office; 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 30375 (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

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.

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_	IN TESTIMONY WHEREOF, I have hereunto set my hand this 29 day of NOV
20 <u>/2</u>	COS.
	Emaat Toui

State of Althornia)
County of Althornia)

On this 29 day of very end of before me a Notary Public in and for the above County and State, personally appeared and acknowledged the execution of the foregoing assignment as his/per free act and deed for the purpose herein set forth.

My Commission E

Page 2 of 2



WHEREAS I, Christopher M. Riley, residing at 737 Young Way, Westminster, MD 211: 8, hereafter referred to as Assignor, am listed as an inventor on a patent application entitled "DIAG NOSIS OF CELLULAR NETWORK ELEMENT STATES USING RADIO FREQUENCY MEASUREMENTS," having AT&T Docket No. 2012-0920, the patent application to be filed in the United States Patent & Trademark Office; 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 30375 (hereinafter referred to as Assignce), 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 parent application identified above, including any and all divisions and continuations thereof and any ard 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 Dollar; (\$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 and 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 inter'erence, 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

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Assignment, including the signature pages hereto, shall be deemed to be an original.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 29 th day of Neverber.

Christopher M. Riley

State of Manyland

County of River Georges

On this 29 day of November 2012, before me a Notary Public in and for the above County and State, personally appeared CR, and acknowledged the execution of the foregoing assignment as his/her free act and deed for the purpose herein set forth.

My Commission Expires: May 8, 2013

CAROLYN THOMPSON Notary Public

CAROLYN THOMPSON Notary Public Prince George's County Maryland My Commission Expires May 8, 2013

Page 2 of 2



WHEREAS I, Bo Ji, residing at 1021 Bluffway Dr., Columbus, OH 43235, hereafter referred to as Assignor, am listed as an inventor on a patent application entitled "DIAGNOSIS OF CELLULAR NETWORK ELEMENT STATES USING RADIO FREQUENCY MEASUREMENTS," having AT&T Docket No. 2012-0920, the patent application to be filed in the United States Patent & Trademark Office; 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 30375 (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;

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IN TESTIMONY	WHEREOF, I have hereunto set my hand this $\frac{2}{3}$ day of $\frac{\text{November}}{3}$,
20_/2.	
State of)
County of FRANKLIN)
and State, personally appear	2012, before me a Notary Public in and for the above County red, and acknowledged the execution of the foregoing assignment as the purpose herein set forth.
	>
Notary Public	and 21 or man
M	y Commission Expires: <u>04, 31, 2017</u>
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Page 2 of 2

Commission Expires Oct. 31, 2017 Recorded in Franklin County

WHEREAS I, Xiaojun Tang, residing at 2600 Camino Ramon, Room 2S000U, San Ramon, CA 94583, hereafter referred to as Assignor, am listed as an inventor on a patent application entitled "DIAGNOSIS OF CELLULAR NETWORK ELEMENT STATES USING RADIO FREQUENCY MEASUREMENTS," having AT&T Docket No. 2012-0920, the patent application to be filed in the United States Patent & Trademark Office; and

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IN TESTIMON 20_12		nto set my hand this	day of <u>Dec.</u> ,
State of California	<u>(</u>)		
County of Contra C	iosta)		
On this <u>3</u> day of and State, personally app his/her free act and deed	peared 120 mg, 20 12, before the purpose herein set for	re me a Notary Public edged the execution of orth.	e in and for the above County of the foregoing assignment as
Notary Public	My Commission Expires:	0:8/11/2015	EUNHEE SONG COMM #1944100 Notary Public-California CONTRA COSTA COUNTY

Page 2 of 2