PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5526122

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the TYPOGRAPHICAL ERROR IN SUPPORTING DOCUMENT previously recorded on Reel 049060 Frame 0623. Assignor(s) hereby confirms the ASSIGNMENT.

CONVEYING PARTY DATA

Name	Execution Date
CANHUI OU	10/26/2007
JIAN LI	10/02/2007
STEVEN GEMELOS	10/03/2007
HOWARD SCOTT MOUNTFORD	10/02/2007
BRENT EDWARD JACOBSON	10/04/2007
ORLANDO ECHEVERRIA-CALVET	10/02/2007
THOMAS CRONIN	10/02/2007
JEROLD DAIZO OSATO	10/04/2007

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	11940842

CORRESPONDENCE DATA

Fax Number: (732)542-2283

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: 732-542-2280

Email: khunter@trbklaw.com

Correspondent Name: AT&T LEGAL DEPARTMENT - TRBK

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

Address Line 4: BEDMINSTER, NEW JERSEY 07921

ATTORNEY DOCKET NUMBER: 2007-0237

NAME OF SUBMITTER:	KIRSTEN HUNTER
SIGNATURE:	/Kirsten Hunter/
DATE SIGNED:	05/16/2019

Total Attachments: 53 source=2007-0237 Corrective Assignment#page1.tif source=2007-0237 Corrective Assignment#page2.tif source=2007-0237 Corrective Assignment#page3.tif source=2007-0237 Corrective Assignment#page4.tif source=2007-0237 Corrective Assignment#page5.tif source=2007-0237 Corrective Assignment#page6.tif source=2007-0237_Corrective Assignment#page7.tif source=2007-0237_Corrective Assignment#page8.tif source=2007-0237 Corrective Assignment#page9.tif source=2007-0237 Corrective Assignment#page10.tif source=2007-0237_Corrective Assignment#page11.tif source=2007-0237 Corrective Assignment#page12.tif source=2007-0237 Corrective Assignment#page13.tif source=2007-0237 Corrective Assignment#page14.tif source=2007-0237 Corrective Assignment#page15.tif source=2007-0237 Corrective Assignment#page16.tif source=2007-0237 Corrective Assignment#page17.tif source=2007-0237 Corrective Assignment#page18.tif source=2007-0237_Corrective Assignment#page19.tif source=2007-0237 Corrective Assignment#page20.tif source=2007-0237 Corrective Assignment#page21.tif source=2007-0237 Corrective Assignment#page22.tif source=2007-0237 Corrective Assignment#page23.tif source=2007-0237 Corrective Assignment#page24.tif source=2007-0237_Corrective Assignment#page25.tif source=2007-0237 Corrective Assignment#page26.tif source=2007-0237 Corrective Assignment#page27.tif source=2007-0237_Corrective Assignment#page28.tif source=2007-0237_Corrective Assignment#page29.tif source=2007-0237 Corrective Assignment#page30.tif source=2007-0237 Corrective Assignment#page31.tif source=2007-0237_Corrective Assignment#page32.tif source=2007-0237_Corrective Assignment#page33.tif source=2007-0237 Corrective Assignment#page34.tif source=2007-0237 Corrective Assignment#page35.tif source=2007-0237_Corrective Assignment#page36.tif source=2007-0237 Corrective Assignment#page37.tif source=2007-0237 Corrective Assignment#page38.tif source=2007-0237 Corrective Assignment#page39.tif source=2007-0237_Corrective Assignment#page40.tif source=2007-0237 Corrective Assignment#page41.tif source=2007-0237 Corrective Assignment#page42.tif source=2007-0237 Corrective Assignment#page43.tif

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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

 SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the ASSIGNEE NAME/SUPPORTING DOCUMENTS previously recorded on Reel 020123 Frame 0930. Assignor(s) hereby confirms the ASSIGNMENT.

CONVEYING PARTY DATA

Name	Execution Date
CANHUI OU	10/26/2007
JIAN LI	10/02/2007
STEVEN GEMELOS	10/03/2007
HOWARD SCOTT MOUNTFORD	10/02/2007
BRENT EDWARD JACOBSON	10/04/2007
ORLANDO ECHEVERRIA-CALVET	10/02/2007
THOMAS CRONIN	10/02/2007
JEROLD DAIZO OSATO	10/04/2007

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	11940842	

CORRESPONDENCE DATA

 Fax Number:
 (732)542-2283

 Phone:
 732-542-2280

 Email:
 khunter@trbklaw.com

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.

Correspondent Name: AT&T LEGAL DEPARTMENT - TRBK

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

Address Line 4: BEDMINSTER, NEW JERSEY 07921

PATENT REEL: 051330 FRAME: 093/2_{019, 11:58 AM}

ATTORNEY DOCKET NUMBER:	2007-0237
NAME OF SUBMITTER:	KIRSTEN HUNTER
Signature:	/Kirsten Hunter/
Date:	05/02/2019

Total Attachments: 52

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RECEIPT INFORMATION

EPAS ID: PAT5503788 05/02/2019 **Receipt Date:**

PATENT

REEL: 051330 FRAME: 09333019, 11:58 AM

MPEP 323.01(b) Declaration In Support of a Request For Correction of Typographical Error in a Recorded Assignment Document

Jeanette Napp declares:

- 1. I am Assistant Secretary of AT&T Intellectual Property, LLC As General Partner for AT&T Intellectual Property I, L.P.
 - 2. AT&T Intellectual Property I, L.P. is the changed name of AT&T Knowledge Ventures, L.P.
- 3. The change of name took place on October 1, 2007 as evidenced by the attached Amendment to a Limited Partnership of AT&T Knowledge Ventures, L.P. The Certificate of Amendment was filed in the Office of the Secretary of State, State of Nevada on October 1, 2007.
- 4. A Patent Assignment of USSN 11/940,842 (now U.S. Patent No. 7,941,778) to AT&T Knowledge Ventures, L.P. was executed by Assignor Jian Li on October 2, 2007. The Patent Assignment was recorded against USSN 11/940,842 (now U.S. Patent No. 7,941,778) at Reel: 020123, Frame: 0930 on November 15, 2007.
- 5. At the time of execution of the Patent Assignment on October 2, 2007, the Assignee name should have been AT&T Intellectual Property I, L.P. rather than AT&T Knowledge Ventures, L.P., since the change of name took place on October 1, 2007.
- 6. This Declaration is filed in support of Assignee's request for correction of the Patent Office records to reflect that the Assignee name should be AT&T Intellectual Property I, L.P. rather than AT&T Knowledge Ventures, L.P.
- 7. Copies of the originally recorded Patent Assignments and cover sheet accompany this Declaration.
- 8. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of the application or any patent issuing thereon.

AT&T Intellectual Property, LLC
As General Partner for AT&T Intellectual Property I, L.P.

Dated: May 15 , 2019

Jeanette Napp

Assistant Secretary

AT&T Intellectual Property, LLC

As General Partner for AT&T Intellectual Property I, L.P.

MPEP 323.01(b) Declaration In Support of a Request For Correction of Typographical Error in a Recorded Assignment Document

Jeanette Napp declares:

- 1. I am Assistant Secretary of AT&T Intellectual Property, LLC As General Partner for AT&T Intellectual Property I, L.P.
 - AT&T Intellectual Property I. L.P. is the changed name of AT&T Knowledge Ventures, L.P.
- 3. The change of name took place on October 1, 2007 as evidenced by the attached Amendment to a Limited Partnership of AT&T Knowledge Ventures, L.P. The Certificate of Amendment was filed in the Office of the Secretary of State, State of Nevada on October 1, 2007.
- 4. A Patent Assignment of USSN 11/940,842 (now U.S. Patent No. 7,941,778) to AT&T Knowledge Ventures, L.P. was executed by Assignor Canhui Ou on October 26, 2007. The Patent Assignment was recorded against USSN 11/940,842 (now U.S. Patent No. 7,941,778) at Reel: 020123, Frame: 0930 on November 15, 2007.
- 5. At the time of execution of the Patent Assignment on October 26, 2007, the Assignee name should have been AT&T Intellectual Property I, L.P. rather than AT&T Knowledge Ventures, L.P., since the change of name took place on October 1, 2007.
- 6. This Declaration is filed in support of Assignee's request for correction of the Patent Office records to reflect that the Assignee name should be AT&T Intellectual Property I, L.P. rather than AT&T Knowledge Ventures, L.P.
- 7. Copies of the originally recorded Patent Assignments and cover sheet accompany this Declaration.
- 8. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statement may jeopardize the validity of the application or any patent issuing thereon.

AT&T Intellectual Property, LLC
As General Partner for AT&T Intellectual Property I, L.P.

Dated: May 15, 2019

Jeanette Napp

Assistant Secretary

AT&T Intellectual Property, LLC

As General Partner for AT&T Intellectual Property I, L.P.

ASSIGNMENT

WHEREAS, Canhui Ou, a citizen of China; residing at 9002 Falcon Street, Danville, California 94506, Jian Li, a citizen of China, residing at 1235 Wildwood Avenue, Sunnyvale, California 94089; Steven Gemelos, a citizen of the United States of America, residing at 22696 Royal Oak Way, Cupertino, California 95014; Howard Scott Mountford, a citizen of the United States of America, residing at 160 Camino Encanto, Danville, California 94526; Brent Edward Jacobson, a citizen of the United States of America, residing at 16405 Penswift Court, Chino Hills, California 91709; Orlando Echeverria-Calvet, a citizen of the United States of America, residing at 9570 Belle Meade Drive, San Ramon, California 94583; Thomas Cronin, a citizen of the United States of America, residing at 167 Lawnview Circle, Danville, California 94526 Jerold Daizo Osato, a citizen of the United States of America, residing at 2079 Shea Drive, Pinole. California 94560; hereinafter called the "Assignors," have made the invention described in the United States patent application entitled "Method of Determining Minimum Cost Path," Attorney Docket No. 7780-070237 (AT&T 2007-0237), for a full description of which reference is here made to an application for Letters Patent of the 4/22/21 Steven Gemelos United States filed herewith; and _AT&T Intellectual Property I, L.P. Initial Date 7

WHEREAS, AT&T KNOWLEDGE VENTURES, L.P., a partnership organized and existing under the laws of the State of Nevada, having a place of business at 645 E. Plumb Lane, Reno, Nevada 89502, hereinafter called the "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 thereof.

NOW, THEREFORE in consideration of the sum of One Dollar (\$1.00) and other valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents does sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; 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 said Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other

patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or any such patent application or patent; and that the Assignors will execute and deliver to the Assignee to carry out the terms of this Assignment. Assignors authorize attorney or agent to fill in the U.S. Application Serial No. above, if required.

AND said Assignors authorize and request the Commissioner of Patents to issue Letters Patent on said application, and on any all divisions and continuations thereof, to said Assignee, its assigns and legal representatives, in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, this Assignment is executed by said Assignors, on the date(s) listed below.

Name of Inventor:	Canhui Ou
Signature of Inventor:	Car On
Date:	10/26/07
Witnesses for	Inventor
First Witness: Second Witnes	S. Rov 10/26/07
	Signature / Date
	RACHAUAN SRINIVASAU
	Full Name (printed)
	ess: all win 10/26/07
	Signature / Date
	Alex de Winter
	Full Name (printed)

Name of Inventor:	Jian Li	_
Signature of Inventor:	Man	
Date:	W/2/2007	_
Witnesses for First Witness: Second Witnes	Signature / Date Zh Full Name (printed)	10/02/2007
Name of Inventor: Signature of Inventor: Date:	Steven Gernelos	- -
Witnesses for First Witness	122	10/03/200)
Second Witn	Full Name (printed)	Li 10/03/2007

Name of Invent	tor:	Howard Scot	tt Mountford	
Signature of In	ventor:	Homary &	or hoursford	
Date:		2-Octobe	27-07	
	Witnesses for I	nventor		<i>i i</i>
	First Witness:	-	Signature / Date	10/02/07
	Second Witnes		Full Name (printed) Signature / Date Xiao Chuan Full Name (printed)	10/02/07
Name of Inver	ntor:	Brent Edwa	rd Jacobson	
Signature of Ir	nventor:			
Date:				
	Witnesses for	Inventor		
	First Witness:		Signature / Date	
			Full Name (printed)	
	Second Witne	ss:	Signature / Date	
			Full Name (printed)	

Name of Invento	r:	Howard Scott	Mountford
Signature of Inve	entor:	***************************************	
Date:		(manuscons)	
<u> </u>	Witnesses for	Inventor	
F	First Witness:	_	Signature / Date
			Full Name (printed)
\$	Second Witner	ss: _	Signature / Date
		-	Full Name (printed)
Name of Invent	or:	Brent Edwar	d Jacobson
Signature of Inv	ventor:	But	E. Jacobran
Date:		Oct	. 4,2007
	Witnesses for	Inventor	
	First Witness:	-	Sighature / Date
	Second Witne	ess: .	Full Name (printed) Signature / Date JAMES Roy Rutchko Full Name (printed)

Name of Inventor:	Orlando Echeverria-Calvet
Signature of Inventor:	Orlando Echeverria Galvet
Date:	Detaber 2, 2007
Witnesses for	r Inventor
First Witness	: Checkist D. Andreson d 10/02/2007 Signature/Date
Second Witne	
	Signature (Date WHULA LARKENS Full Name (printed)
Name of Inventor:	Thomas Cronin
	Thurings Cromin
Signature of Inventor:	
Date:	
Witnesses for	r Inventor
First Witness	Signature / Date
	Full Name (printed)
Second Witne	Signature / Date
	Full Name (printed)

Name of Inven	itor:	Orlando Ech	everria-Calvet	
Signature of In	ventor:			
Date:		***************************************		100 Barton Control of the Control of
	Witnesses for	Inventor		
	First Witness:		Signature / Date	
			Full Name (printed	l)
	Second Witne	ss:	Signature / Date	
			Full Name (printed	i)
Name of Inve	ntor:	Thomas Cro	onin	
Signature of le				
Date:		10/02/8	>7	
	Witnesses for	Inventor	0 -	
	First Witness:		Signature / Date	10/02/0]
	Second Witne	ess:	Full Name (printe Signature / Date Xao (Num Full Name (printe	(i)/02/07 Yi

Name of Inventor:	Jerold Daizo Osato
Signature of Inventor:	Jull Davin Darto
Date:	10-4-07
Witnesses for	Inventor 10/04/07
First Witness:	
Second Witne	Full Natine (printed)

ASSIGNMENT

WHEREAS, Canhui Ou, a citizen of China; residing at 9002 Falcon Street. Danville, California 94506, Jlan Li, a citizen of China, residing at 1235 Wildwood Avenue, Sunnyvale, California 94089; Steven Gemelos, a citizen of the United States of America. residing at 22696 Royal Oak Way, Cupertino, California 95014; Howard Scott Mountford, a citizen of the United States of America, residing at 160 Camino Encanto, Danville, California 94526; Brent Edward Jacobson, a citizen of the United States of America, residing at 16405 Penswift Court, Chino Hills, California 91709; Orlando Echeverria-Calvet, a citizen of the United States of America, residing at 9570 Belle Meade Drive, San Ramon, California 94583; Thomas Cronin, a citizen of the United States of America, residing at 167 Lawnview Circle, Danville, California 94526 Jerold Daizo Osato, a citizen of the United States of America, residing at 2079 Shea Drive, Pinole, California 94560; hereinafter called the "Assignors," have made the invention described in the United States patent application entitled "Method of Determining Minimum Cost Path," Attorney Docket No. 7780-070237 (AT&T 2007-0237), for a full description of which reference is here made to an application for Letters Patent of the United States filed herewith; and AT&T Intellectual Property I, L.P. Howard Scott Mountford

WHEREAS, AT&T KNOWLEDGE-VENTURES, L.P., a partnership organized and existing under the laws of the State of Nevada, having a place of business at 645 E. Plumb Lane, Reno, Nevada 89502, hereinafter called the "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 thereof.

NOW, THEREFORE in consideration of the sum of One Dollar (\$1.00) and other valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents does sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may Issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; 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 said Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other

PATENT REEL: 020123 FRAME: 0932

patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or any such patent application or patent; and that the Assignors will execute and deliver to the Assignee to carry out the terms of this Assignment. Assignors authorize attorney or agent to fill in the U.S. Application Serial No. above, if required.

AND said Assignors authorize and request the Commissioner of Patents to issue Letters Patent on said application, and on any all divisions and continuations thereof, to said Assignee, its assigns and legal representatives, in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, this Assignment is executed by said Assignors, on the date(s) listed below.

Name of Inventor:	Canhui Ou			
Signature of Inventor:	Can	S On		
Date:	10/	26/07	***************************************	
Witnesses fo	r Inventor	,		
First Witness	s:	SiRn	10/26/07	
		Signature / Date		
		R ALHAVAN	SRINIVA S& U	
		Full Name (printe	ed)	
Second Witn	ess:	_ aldwi	10/26/07	
		Signature / Date		
		Alex de W.	<i>н</i> г	
		Full Name (printe	ed)	

Name of Inventor:	Jian Li		_
Signature of Inventor:	(1)	Yan	_
Date:	10/2	ran [2007	
First W	ses for Inventor itness: d Witness:	Signature / Date Full Name (printed) Signature / Date Xi ao Chuan Full Name (printed)	10/02/2007 10/02/2007
Name of Inventor: Signature of Inventor: Date:	Steven Ge	melos 3/ø7	_ _ _
	sses for Inventor	Signature / Date	10/03/2007
Secor	nd Witness:	Full Name (printed) Signature / Date Xi ao Ch nan Yi Full Name (printed)	Li 10/03/2007

- 3 -

PATENT REEL: 020123 FRAME: 0934

PATENT

Name of Inven	tor:	Howard Sco	tt Mountford	-
Signature of In	ventor:	Howard S	wo hoursford	<u>-</u>
Date:		2-Octob	er-07	-
	Witnesses for	Inventor		, ;
	First Witness:		Signature / Date	10/02/07
	Second Witne	ss:	Full Name (printed) Signature / Date Xiao Chuan Full Name (printed)	L' 10/02/07
Name of Inver	ntor:	Brent Edwa	ırd Jacobson	
Signature of Ir	nventor:			
Date:				
	Witnesses for	Inventor		
	First Witness:		Signature / Date	
	0 114.		Full Name (printed)	
	Second Witne	ess:	Signature / Date	
			Full Name (printed)	

- 4 -

PATENT REEL: 020123 FRAME: 0935

PATENT

Name of Inven	itor:	Howard Scott Mountford
Signature of Ir	ventor:	
Date:		
	Witnesses for	<u>Inventor</u>
	First Witness:	Signature / Date
		Full Name (printed)
	Second Witne	Signature / Date
		Full Name (printed)
Name of Inve	ntor:	Brent Edward Jacobson
Signature of I	nventor:	But E. Jacobron
Date:		Oct. 4,2007
	Witnesses for	<u>Inventor</u>
	First Witness:	Signature / Dake
	Second Witne	Full Name (printed)

-4-

PATENT REEL: 020123 FRAME: 0936

PATENT

Name of Inventor:	Orlando Echeverria-Calvet
Signature of Inventor:	Orlando Echeverria Calvet
Date:	_ October 2,2007
Witnesses for First Witnesses for Witnesses for First Witnesses fo	Signature Date Michael David Anderson Full Name (printed)
Name of Inventor:	Thomas Cronin
Signature of Inventor:	
Date:	
Witnesses for	or Inventor
First Witnes	Signature / Date
Constant 1881	Full Name (printed)
Second Witn	Signature / Date
	Full Name (printed)

- 5 -

PATENT PAGE.03 **

REEL: 020123 FRAME: 0937

PATENT

Name of Inver	ntor:	Orlando Ecl	heverria-	Calvet	
Signature of Ir	nventor:				arten dender anderen a
Date:					
	Witnesses for	Inventor			
	First Witness:			Signature / Date	
				Full Name (printed)	
	Second Witne	ss:		Signature / Date	
				Full Name (printed)	and the second s
Name of Inve		Thomas Cr	onin		
Date:		10/02/	67		
	Witnesses for	Inventor		0 —	<i>i</i>
	First Witness:			Signature / Date	10/02/07
	Second Witne	ess:		Full Name (printed) Signature / Date	Li Ti 10/02/07

- 5 -

PATENT REEL: 020123 FRAME: 0938

PATENT

Name of Inventor:	<u>Jerold Dai</u>	zo Osato	
Signature of Inventor:	0	Davin Darto	_
Date:	10-4	-07	_
Witnesses	or Inventor	15	0/04/07
First Witnes	ss:	./	
Second Wil	iness:	Signature / Date Full Name (printed) Signature / Date	0/04/07
		Full Name (printed)	

REEL: 051330 FRAME: 0951

RECORDED: 11/15/2007

ASSIGNMENT

WHEREAS, Canhui Ou, a citizen of China; residing at 9002 Falcon Street, Danville, California 94506, Jian Li, a citizen of China, residing at 1235 Wildwood Avenue, Sunnyvale, California 94089; Steven Gemelos, a citizen of the United States of America, residing at 22696 Royal Oak Way, Cupertino, California 95014; Howard Scott Mountford, a citizen of the United States of America, residing at 160 Camino Encanto, Danville, California 94526; Brent Edward Jacobson, a citizen of the United States of America, residing at 16405 Penswift Court, Chino Hills, California 91709; Orlando Echeverria-Calvet, a citizen of the United States of America, residing at 9570 Belle Meade Drive. San Ramon, California 94583; Thomas Cronin, a citizen of the United States of America, residing at 167 Lawnview Circle, Danville, California 94526 Jerold Daizo Osato, a citizen of the United States of America, residing at 2079 Shea Drive, Pinole, California 94560; hereinafter called the "Assignors," have made the invention described in the United States patent application entitled "Method of Determining Minimum Cost Path." Attorney Docket No. 7780-070237 (AT&T 2007-0237), for a full description of which reference is here made to an application for Letters Patent of the United States filed herewith; and AT&T Intellectual Property I, L.P. 3/29/19 Brent Edward Jacobson

WHEREAS, AT&T KNOWLEDGE VENTURES, L.P., a partnership organized and existing under the laws of the State of Nevada, having a place of business at 645 E. Plumb Lane, Reno, Nevada 89502, hereinafter called the "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 thereof.

NOW, THEREFORE in consideration of the sum of One Dollar (\$1.00) and other valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents does sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; 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 said Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other

patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or any such patent application or patent; and that the Assignors will execute and deliver to the Assignee to carry out the terms of this Assignment. Assignors authorize attorney or agent to fill in the U.S. Application Serial No. above, if required.

AND said Assignors authorize and request the Commissioner of Patents to issue Letters Patent on said application, and on any all divisions and continuations thereof, to said Assignee, its assigns and legal representatives, in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, this Assignment is executed by said Assignors, on the date(s) listed below.

Name of Inventor:	Canhui Ou
Signature of Inventor:	Car On
Date:	19/26/07
Witnesses for	Inventor
First Witness:	S. Rov 10/26/07
	Signature / Date
	RACHAVAN BRINIVASAU
	Full Name (printed)
Second Witne	ess: all 10/26/07
	Signature / Date
	Alex de W.nter
	Full Name (printed)

Name of Inventor:	Jian Li	
Signature of Inventor:	Moan	and the first of the control of the
Date:	W/2/2007	
Witnesses		10/02/2007
First Witnes	ness: Xiao C	gnature / Date Zhi Li Ill Name (printed) Quantum / Date
Name of Inventor: Signature of Inventor: Date:	Steven Gemelos	
<u>Witnesses</u> First Witne		2 /0/03/3-00)
Second W	itness:	Elin Li Full Name (printed), Chuan Yi Full Name (printed)

Name of Invento	or:	Howard Scot	t Mountford	
Signature of Inv	entor:	Howard Su	ou linuitard	
Date:		2-Octobe	r-07	MARIOUS
	Witnesses for I	nventor		
	First Witness:	-	Signature / Date	10/03/07
	Second Witnes	- :s; _	Full Name (printed) Signature / Date Xiao Chuan Full Name (printed)	10/02/07
Name of Inven	tor:	Brent Edwar	rd Jacobson	
Signature of In	ventor:			
Date:				
	Witnesses for	Inventor		
	First Witness:		Signature / Date	and the second s
			Full Name (printed)	
	Second Witner	ss:	Signature / Date	
			Full Name (printed)	

Name of Invent	tor:	Howard Scott Mountford
Signature of In	ventor:	
Date:		
	Witnesses for	nventor
	First Witness:	
		Signature / Date
		Full Name (printed)
	Second Witnes	
		Signature / Date
		Full Name (printed)
Name of Inver	ntor:	Brent Edward Jacobson
Signature of Ir	ventor:	But E. Localron
Date:		Oct. 4,2007
	Witnesses for	<u>Inventor</u>
	First Witness:	Sighature / Date 10/4/07
	Second Witne	JUYEE JACOBSON Full Name (printed)
		JAMES Loy Birtahko Full Name (printed)

Name of inver	itor:	Orlando Echeverria-Calvet	
Signature of Ir	ventor:	Orlando Echeverria-Balvet	
Date:		October 2,2007	
	Witnesses for		
	First Witness:	(Muchael Defedieson 10) Signature / Date	02/2007
		Michael David Anderson Full Name (printed)	
	Second Witne		67
		WHUDA LARKENS Full Name (printed)	
Name of Inven	tor:	Thomas Cronin	
Signature of In	ventor:		
Date:			
	Witnesses for	Inventor	
	First Witness:	Signature / Date	
		Full Name (printed)	
	Second Witnes	ss:	
		Signatura / Date	
		Full Name (printed)	

Name of Inver	ntor:	Orlando Ec	cheverria-(Calvet	
Signature of I	nventor:				
Date:					Marketine and the second
	Witnesses for	<u>Inventor</u>			
	First Witness:		***************************************	Signature / Date	Parties and the second
				Full Name (printed)	
Second Witne		ss:	***************************************	Signature / Date	
				Full Name (printed)	
Name of Inve	ntor:	Thomas Cr	ronin		-
Signature of I	nventor:	VIC-			
Date:		10/02/	07		
	Witnesses for	Inventor		0 -	, ,
	First Witness:			Signature / Date	10/02/07
	Second Witne	ss:	X	Full Name (printed) Signature / Date Full Name (printed)	Li Ti 10/02/07

Name of Inventor:	<u>Jerold Daizo</u>	Osato	
Signature of Inventor:	Jewell D.		
Date:	10-4-	07	
Witnesses for	Inventor	1	10/04/07
First Witness		Signature / Date	10/04/0/
		Full Name (printed)	•
Second Witne	es:	Signature / Date	10/04/07
		Yi (lu Ch Man Yi Full Name (printed)	

ASSIGNMENT

WHEREAS, Canhui Ou, a citizen of China; residing at 9002 Falcon Street, Danville, California 94506, Jian Li, a citizen of China, residing at 1235 Wildwood Avenue, Sunnyvale, California 94089; Steven Gemelos, a citizen of the United States of America, residing at 22696 Royal Oak Way, Cupertino, California 95014; Howard Scott Mountford, a citizen of the United States of America, residing at 160 Camino Encanto, Danville, California 94526; Brent Edward Jacobson, a citizen of the United States of America, residing at 16405 Penswift Court, Chino Hills, California 91709; Orlando Echeverria-Calvet, a citizen of the United States of America, residing at 9570 Belle Meade Drive, San Ramon, California 94583; Thomas Cronin, a citizen of the United States of America, residing at 167 Lawnview Circle, Danville, California 94526 Jerold Daizo Osato, a citizen of the United States of America, residing at 2079 Shea Drive, Pinole, California 94560; hereinafter called the "Assignors," have made the invention described in the United States patent application entitled "Method of Determining Minimum Cost Path," Attorney Docket No. 7780-070237 (AT&T 2007-0237), for a full description of which reference is here made to an application for Letters Patent of the United States filed herewith; and OEC

Jnited States filed herewith; and AT&T Intellectual Property I, L.P. OEC Initial Date Orlando Echeverria-Calvet

WHEREAS, AT&T KNOWLEDGE VENTURES, L.P., a partnership organized and existing under the laws of the State of Nevada, having a place of business at 645 E. Plumb Lane, Reno, Nevada 89502, hereinafter called the "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 thereof.

NOW, THEREFORE in consideration of the sum of One Dollar (\$1.00) and other valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents does sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; 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 said Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other

- 1 -

PATENT REEL: 020123 FRAME: 0932

PATENT

patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or any such patent application or patent; and that the Assignors will execute and deliver to the Assignee to carry out the terms of this Assignment. Assignors authorize attorney or agent to fill in the U.S. Application Serial No. above, if required.

AND said Assignors authorize and request the Commissioner of Patents to issue Letters Patent on said application, and on any all divisions and continuations thereof, to said Assignee, its assigns and legal representatives, in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, this Assignment is executed by said Assignors, on the date(s) listed below.

Name of Inventor:	Canhui Ou		
Signature of Inventor:	Car	5 On	
Date:	17/	26/07	***************************************
Witnesses fo	r Inventor	l	
First Witness	<u>.</u>	S. Rev	10/26/07
		Signature / Date	
		RAGHAVAN	3 RI NIVA SA U
		Full Name (printed	3)
Second Witne	ess:	_ aldwi	10/26/07
		Signature / Date	
		Alex de W.ak	
		Full Name (printed	i)

Name of Inventor:			
Signature of Inver	ntor:	Van	-
Date:	10/2	12007	
W	itnesses for Inventor		
Fi	rst Witness:	Signature / Date	10/02/2007
Se	econd Witness:	Full Name (printed)	ni Li 10/02/2007
Name of Inventor	: <u>Steven Ge</u>	emelos	
Signature of Inve	ntor:	J	
Date:	10/	3/07	
	fitnesses for Inventor	Signature / Date	10/03/200)
So	econd Witness:	Full Name (printed) Signature / Date Xi ao Ch nan Yi	10/03/2007

- 3 **-**

Full Name (printed)

PATENT REEL: 020123 FRAME: 0934

PATENT

Name of Inve	ntor:	Howard Sc	ott Mountford	
Signature of I	nventor:	-Homand	wo hoursford	
Date:		2-0ctober -07		_
	Witnesses for	Inventor		
	First Witness:		Signature / Date	10/02/07
	Second Witne	ess:	Full Name (printed) Signature / Date Xiao Chuan Full Name (printed)	10/02/0
Name of Inve		Brent Edwa	ard Jacobson	_
Signature of I	Inventor:	*************************************		_
Date:				•••
	Witnesses for	Inventor		
	First Witness:		Signature / Date	
	Canad Mitte		Full Name (printed)	***************************************
	Second Witne	199.	Signature / Date	**************************************
			Full Name (printed)	

- 4 -

PATENT REEL: 020123 FRAME: 0935

PATENT

Name of Inventor:		Howard Scot	t Mountford
Signature of In	ventor:		
Date:			
	Witnesses for	Inventor	
	First Witness:	-	Signature / Date
		-	Full Name (printed)
	Second Witne	ss: _	Signature / Date
		-	Full Name (printed)
Name of Inver	ntor:	Brent Edwar	d Jacobson
Signature of Ir	nventor:	But	E. Jacobran
Date:		Oct	. 4,2007
	Witnesses for	Inventor	
	First Witness:	-	Sighature / Dale
	Second Witne	- :ss: _	Full Name (printed) Signature / Date JAMES Loy Bitchko Full Name (printed)

- 4 -

PATENT REEL: 020123 FRAME: 0936

PATENT

Name of Inventor:	Orlando Echeverria-Calvet
Signature of Inventor:	Orlando Echeverria Calvet
Date:	<u>October</u> 2,2007
Witnesse	s for Inventor
First Witn	ess: (Suchail) Addreson 10/02/2007 Signature / Date
Second \	Michael David Anderson Full Name (printed)
	WHUBA LARKENS Full Name (printed)
Name of Inventor:	Thomas Cronin
Signature of Inventor:	
Date:	
Witnesse	s for Inventor
First Witn	
	Signature / Date
	Full Name (printed)
Second V	/itness: Signature / Date
	Full Name (printed)

- 5 -

PATENT TOTAL PAGE.03 **

REEL: 020123 FRAME: 0937

PATENT

Name of Inventor:		Orlando Ech	neverria-Calvet	
Signature of Inventor:				
Date:		•		***************************************
	Witnesses for	Inventor		
	First Witness:			TATAL SALES AND
			Signature / Date	
			Full Name (printed)	
	Second Witne	ss:	0:	
			Signature / Date	
			Full Name (printed)	
Name of Inver	ntor:	Thomas Cro	onin	
Signature of Ir	nventor:	V.		***************************************
Date:		10/02/8	27	
	Witnesses for	Inventor	_	
	First Witness:		Signature / Date	10/02/07
	Second Witne	ss:	Full Name (printed) Signature / Date	Li Ti 10/02/07
			Yico Chun Yi Full Name (printed)	

-5-

PATENT REEL: 020123 FRAME: 0938

PATENT

Name of Inventor:	Jerold Daizo Osato
Signature of Inventor:	Jeill Davin Varto
Date:	10-4-07
Witnesses for	Inventor 10/04/07
First Witness:	Signature / Date
Second Witne	Full Name (printed)

RECORDED: 11/15/2007

ASSIGNMENT

WHEREAS, Canhui Ou, a citizen of China; residing at 9002 Falcon Street, Danville, California 94506, Jian Ll, a citizen of China, residing at 1235 Wildwood Avenue, Sunnyvale, California 94089; Steven Gemelos, a citizen of the United States of America, residing at 22696 Royal Oak Way, Cupertino, California 95014; Howard Scott Mountford, a citizen of the United States of America, residing at 160 Camino Encanto, Danville, California 94526; Brent Edward Jacobson, a citizen of the United States of America, residing at 16405 Penswift Court, Chino Hills, California 91709; Orlando Echeverria-Calvet, a citizen of the United States of America, residing at 9570 Belle Meade Drive, San Ramon, California 94583; Thomas Cronin, a citizen of the United States of America, residing at 167 Lawnview Circle, Danville, California 94526 Jerold Daizo Osato, a citizen of the United States of America, residing at 2079 Shea Drive, Pinole, California 94560; hereinafter called the "Assignors," have made the invention described in the United States patent application entitled "Method of Determining Minimum Cost Path," Attorney Docket No. 7780-070237 (AT&T 2007-0237), for a full description of which reference is here made to an application for Letters Patent of the United States filed herewith; and AT&T Intellectual Property I, L.P. 3/27/19 Thomas Cronin Date

WHEREAS, AT&T KNOWLEDGE VENTURES, L.P., a partnership organized and existing under the laws of the State of Nevada, having a place of business at 645 E. Plumb Lane, Reno, Nevada 89502, hereinafter called the "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 thereof.

NOW, THEREFORE in consideration of the sum of One Dollar (\$1.00) and other valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents does sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; 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 said Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other

PATENT REEL: 020123 FRAME: 0932

> PATENT REEL: 051330 FRAME: 0968

patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or any such patent application or patent; and that the Assignors will execute and deliver to the Assignee to carry out the terms of this Assignment. Assignors authorize attorney or agent to fill in the U.S. Application Serial No. above, if required.

AND said Assignors authorize and request the Commissioner of Patents to issue Letters Patent on said application, and on any all divisions and continuations thereof, to said Assignee, its assigns and legal representatives, in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, this Assignment is executed by said Assignors, on the date(s) listed below.

Name of Inventor:	Canhui Ou
Signature of Inventor:	Car On
Date:	10/26/07
Witnesses for	<u>Inventor</u>
First Witness:	S. Rev 10/26/07
	Signature / Date
	RACHAVAN SRINIUASAU
	Full Name (printed)
Second Witne	ess: <u>allli 10/26/07</u>
	Signature / Date
	Alex de Winter
	Full Name (printed)

- 2 -

PATENT REEL: 020123 FRAME: 0933

Name of Inventor:	Jian Li
Signature of Inventor:	[Wan
Date:	10/2/2007
Witnesses for	
First Witness:	Signature / Date
Second Witne	Full Name (printed) Full Name (printed) Xi ao Chuan Full Name (printed)
Name of Inventor:	Steven Gemelos
Signature of Inventor:	
Date:	1\$ /3/\$7
Witnesses for	Inventor
First Witness:	Signature / Date
Second Witne	Full Nahae (printed) / 10/03/2007 Signature / Date Xiao Chuan Yi

- 3 -

Full Name (printed)

PATENT REEL: 020123 FRAME: 0934

Name of Inver	ntor:	Howard Scott Mountford	1981-1989-1999-1999-1999-1999-1999-1999
Signature of In	nventor:	Howard Swa hoursford	
Date:	e former per entire — reference, per per per per entire — el capación (o	2-0ctober -07	
	Witnesses for	<u>Inventor</u>	
	First Witness:	25	10/02/07
	Second Witne	Signature / Date Full Name (printed Signature / Date Xiao Chuan Full Name (printed	72 10/02/07
Name of Inver	ntor:	Brent Edward Jacobson	
Signature of Ir	ventor:		***************************************
Date:			
	Witnesses for	nventor	
	First Witness:	Olavahari (D	
		Signature / Date	
		Full Name (printed	1)
	Second Witnes	Signature / Date	
		Full Name (printed	1)

-4-

PATENT REEL: 020123 FRAME: 0935

> PATENT REEL: 051330 FRAME: 0971

Name of Inventor:	Howard Scott Mountford
Signature of Inventor:	
Date:	
Witnesses for	Inventor
First Witness:	
	Signature / Date
	Full Name (printed)
Second Witne	
	Signature / Date
	Full Name (printed)
Name of Inventor:	Brent Edward Jacobson
Signature of Inventor:	Dun C. Markon
Date:	Oct. 4,2007
Witnesses for	Inventor
First Witness:	Signature / Vale 10/4/07
Second Witne	Full Name (printed)

- 4 -

PATENT REEL: 020123 FRAME: 0936

> PATENT REEL: 051330 FRAME: 0972

Name of Inventor:	Orlando Echeverria-Calvet
Signature of Inventor:	Orlando Echeverria Calvet
Date:	October 2,2007
Witnesses for	or Inventor
First Witnes	s: (Suchar Defend 10/02/2007
	Michael David Anderson Full Name (printed)
Second Witn	ness: <u>A Suelas Polices 10/2/07</u>
	WANDA LARKENS Full Name (printed)
	w · · · /
Name of Inventor:	Thomas Cronin
Signature of Inventor:	
Date:	
Witnesses for	r Inventor
First Witness	
	Signature / Date
	Full Name (printed)
Second Witne	9999: Signatura / Date
	Full Name (printed)

- 5 -

PATENT PAGE.03 **

REEL: 020123 FRAME: 0937

Name of Inventor:		Orlando Ec	heverria-Calvet	
Signature of Ir	ventor:			<u> </u>
Date:				
	Witnesses for I	Inventor		
	First Witness:		Signature / Date	
	Second Witness:		Full Name (printed)	
			Signature / Date	
			Full Name (printed)	
Name of Inven		Thomas Cro	onin	······································
Signature of In	ventor:			
Date:	Witnesses for l	10/02/0	7	
	Witnesses for la First Witness:	<u>nventor</u>	Signature / Date	10/02/07
	Second Witnes	s:	Full Name (printed) Signature / Date Xi (10) (huan Yi Full Name (printed)	Li Ti 10/02/07

- 5 -

PATENT REEL: 020123 FRAME: 0938

Name of Inventor:	Jerold Daizo Osato	
Signature of Inventor:	Jewill Dary Dato	e 116 de este é como promo como se
Date:	10-4-07	
Witnesses for	Inventor 10/05	4107
First Witness:		<u>'/</u>
	Signature / Date Signature / Date Full Name (prigled)	
Second Witne	/ha) (2 12(1	4/07
	Xi oro Chruan Yi Full Name (printed)	

RECORDED: 11/15/2007

PATENT REEL: 020123 FRAME: 0939

ASSIGNMENT

WHEREAS, Canhui Ou, a citizen of China; residing at 9002 Falcon Street. Danville, California 94506, Jian Li, a citizen of China, residing at 1235 Wildwood Avenue, Sunnyvale, California 94089; Steven Gemelos, a citizen of the United States of America. residing at 22696 Royal Oak Way, Cupertino, California 95014; Howard Scott Mountford, a citizen of the United States of America, residing at 160 Camino Encanto. Danville, California 94526; Brent Edward Jacobson, a citizen of the United States of America, residing at 16405 Penswift Court, Chino Hills, California 91709; Orlando Echeverria-Calvet, a citizen of the United States of America, residing at 9570 Belle Meade Drive, San Ramon, California 94583; Thomas Cronin, a citizen of the United States of America, residing at 167 Lawnview Circle, Danville, California 94526 Jerold Daizo Osato, a citizen of the United States of America, residing at 2079 Shea Drive, Pinole, California 94560; hereinafter called the "Assignors," have made the invention described in the United States patent application entitled "Method of Determining Minimum Cost Path," Attorney Docket No. 7780-070237 (AT&T 2007-0237), for a full description of which reference is here made to an application for Letters Patent of the United States filed herewith; and J. O. 4-25-19 Jerold Daizo Osato AT&T Intellectual Property I, L.P.

WHEREAS, AT&T KNOWLEDGE VENTURES, L.P., a partnership organized and existing under the laws of the State of Nevada, having a place of business at 645 E. Plumb Lane, Reno, Nevada 89502, hereinafter called the "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 thereof.

NOW, THEREFORE in consideration of the sum of One Dollar (\$1.00) and other valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents does sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; 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 said Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other

patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or any such patent application or patent; and that the Assignors will execute and deliver to the Assignee to carry out the terms of this Assignment. Assignors authorize attorney or agent to fill in the U.S. Application Serial No. above, if required.

AND said Assignors authorize and request the Commissioner of Patents to issue Letters Patent on said application, and on any all divisions and continuations thereof, to said Assignee, its assigns and legal representatives, in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, this Assignment is executed by said Assignors, on the date(s) listed below.

Name of Inventor:	Canhui Ou
Signature of Inventor:	Car On
Date:	10/26/07
Witnesses for	Inventor
First Witness:	S. Rov 10/26/07
	Signature / Date
	RACHAVAN SRINIVASAU
	Full Name (printed)
Second Witne	ess: allar 10/26/07
	Signature / Date
	Alex de W. ater
	Full Name (printed)

Name of Inventor:	Jian Li		<u>-</u>
Signature of Inventor	or:	<i>an</i>	_
Date:	10/2/	ian 12007	_
<u>Witr</u>	nesses for Inventor	San to the	
First	t Witness:	Signature / Date	10/02/200)
Sec	ond Witness:	Full Name (printed) Signature / Date Xi ao Chuan Full Name (printed)	: Li 0/02/2007
Name of Inventor: Signature of Invent Date:	Steven Geror: $\frac{1\phi/3}{2}$	nelos 3/07	
	nesses for Inventor		10/02/2007
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Name of Inventor	: <u> </u>	Howard Scott Mountford	
Signature of Inve	ntor:	toward Sur linuitard	
Date:	_	2-0ctober -07	Managara
<u>w</u>	litnesses for Ir	ventor	
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S	econd Witness	Full Name (printed) Signature / Date Xiao Chuan Full Name (printed)	10/02/07
Name of Invento	r: <u> </u>	Brent Edward Jacobson	
Signature of Inve	entor:		
Date:			
<u>v</u>	Vitnesses for I	nventor	
F	irst Witness:	Signature / Date	, , , , , , , , , , , , , , , , , , , ,
		Full Name (printed)	,,
S	Second Witnes	S: Signature / Date	
		Full Name (printed)	

Name of Inventor:	Howard S	Scott Mountford
Signature of Inventor:	-	
Date:	***************************************	
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		Signature / Date
		Full Name (printed)
Second W	/itness:	
		Signature / Date
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Name of Inventor: Signature of Inventor:	Brent Ed	ward Jacobson
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Date:	0-0	7. 4,2007
Witnesse	s for Inventor	
First Witn	ess;	Signature / Date 10/4/07
Second V	Vitness:	Full Name (printed) PR BULL Signature / Date JAMES Roy Rutchko Full Name (printed)

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Signature of Invento	or: Orland	do Echeverria balvet	
Date:	_Octo	ber 2,2007	
Witn	esses for Inventor		
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		Michael David Anderson Full Name (printed)	
Seco	nd Witness:	Signature (Date) Signature (Date	
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		Full Name (printed)	
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Signature of Invento	r:		
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Witne	esses for Inventor		
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Name of Inver	itor:	Orlando Ect	neverria-Calvet	
Signature of Ir	ventor:			
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	Witnesses for First Witness:	Inventor	Signature / Date	10/02/07
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Signature of Inventor:	Jeill Davin Darto
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Witnesses for	Inventor 10/04/07
First Witness:	Signature / Date
Second Witne	Full Natine (printed)