# 502766978 04/14/2014

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2813573

UBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT		
NATURE OF CONVEYA	NCE:	ASSIGNMENT	ASSIGNMENT		
CONVEYING PARTY D	ΑΤΑ				
		Name	Execution Date		
LEV BROUK			07/30/2001		
KENNETH NORTON			06/20/2001		
JASON DOUGLAS			06/20/2001		
PETER PANEC			06/20/2001		
RECEIVING PARTY DA	ТА				
Name:	GRAND	CENTRAL NETWORKS, INC.			
Street Address:	275 SAC	RAMENTO ST.			
City:	SAN FRA	SAN FRANCISCO			
State/Country:	CALIFOF	CALIFORNIA			
Postal Code:	94111				
PROPERTY NUMBERS	Total: 1				
Droporty Type		Number			
Property Type					
	1:	3409044			
Application Number:					
Application Number:					
Application Number: CORRESPONDENCE D Fax Number:	ATA (4	3409044	successful, it will be sent vi		
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>US Mail.</i> Phone:	ATA (4 e sent to t 4(	3409044 08)971-4660 <b>he e-mail address first; if that is uns</b> 08-971-2573	successful, it will be sent vi		
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>US Mail.</i> Phone: Email:	ATA (4 e sent to t 4( W	3409044 08)971-4660 <b>he e-mail address first; if that is uns</b> 08-971-2573 /yndie@zilkakotab.com	successful, it will be sent vi		
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>US Mail.</i> Phone: Email: Correspondent Name:	ATA (4 e sent to t 4( W Z	3409044 08)971-4660 <b>he e-mail address first; if that is uns</b> 08-971-2573 /yndie@zilkakotab.com ILKA-KOTAB, PC	successful, it will be sent vi		
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>US Mail.</i> Phone: Email: Correspondent Name: Address Line 1:	ATA (4 e sent to t 4( W Z P	3409044 08)971-4660 <b>he e-mail address first; if that is uns</b> 08-971-2573 /yndie@zilkakotab.com	successful, it will be sent vi		
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>US Mail.</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	ATA (4 e sent to t 4( W Z P S	3409044 08)971-4660 <b>he e-mail address first; if that is uns</b> 08-971-2573 /yndie@zilkakotab.com ILKA-KOTAB, PC .O. BOX 721120 AN JOSE, CALIFORNIA 95172	successful, it will be sent vi		
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>US Mail.</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	ATA (4 e sent to t 4( W Z P S	3409044 08)971-4660 <b>he e-mail address first; if that is uns</b> 08-971-2573 /yndie@zilkakotab.com ILKA-KOTAB, PC .O. BOX 721120 AN JOSE, CALIFORNIA 95172 SFC1P117C/209US1C1C1	successful, it will be sent vi		
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>US Mail.</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUME NAME OF SUBMITTER:	ATA (4 e sent to t 4( W Z P S	3409044 08)971-4660 <b><i>he e-mail address first; if that is uns</i></b> 08-971-2573 /yndie@zilkakotab.com ILKA-KOTAB, PC .O. BOX 721120 AN JOSE, CALIFORNIA 95172 SFC1P117C/209US1C1C1 JAMIE L. ROSSI	successful, it will be sent vi		
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>US Mail.</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUNAME OF SUBMITTER: SIGNATURE:	ATA (4 e sent to t 4( W Z P S	3409044 08)971-4660 <b><i>he e-mail address first; if that is uns</i></b> 08-971-2573 /yndie@zilkakotab.com ILKA-KOTAB, PC .O. BOX 721120 AN JOSE, CALIFORNIA 95172 SFC1P117C/209US1C1C1 JAMIE L. ROSSI /JAMIE ROSSI/	successful, it will be sent vi		
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>US Mail.</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUNAME OF SUBMITTER: SIGNATURE: DATE SIGNED:	ATA (4 e sent to t 4( W Z P S	3409044 08)971-4660 <b><i>he e-mail address first; if that is uns</i></b> 08-971-2573 /yndie@zilkakotab.com ILKA-KOTAB, PC .O. BOX 721120 AN JOSE, CALIFORNIA 95172 SFC1P117C/209US1C1C1 JAMIE L. ROSSI	successful, it will be sent v		
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>US Mail.</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 1: Address Line 4: ATTORNEY DOCKET NUN NAME OF SUBMITTER: SIGNATURE: DATE SIGNED: Total Attachments: 7	ATA (4 e sent to t 4( W Z P S JMBER:	3409044 08)971-4660 <b>the e-mail address first; if that is uns</b> 08-971-2573 /yndie@zilkakotab.com ILKA-KOTAB, PC .O. BOX 721120 AN JOSE, CALIFORNIA 95172 SFC1P117C/209US1C1C1 JAMIE L. ROSSI /JAMIE ROSSI/ 04/14/2014			
Application Number: CORRESPONDENCE D Fax Number: Correspondence will be US Mail. Phone: Email: Correspondent Name: Address Line 1: Address Line 1: Address Line 4: ATTORNEY DOCKET NUME ADDRESS DOCKET NUME AME OF SUBMITTER: DATE SIGNED: Total Attachments: 7 ource=SFC1P117A_Ass	ATA (4 e sent to t 4( V Z JMBER:	3409044 08)971-4660 <b><i>he e-mail address first; if that is uns</i></b> 08-971-2573 /yndie@zilkakotab.com ILKA-KOTAB, PC .O. BOX 721120 AN JOSE, CALIFORNIA 95172 SFC1P117C/209US1C1C1 JAMIE L. ROSSI /JAMIE ROSSI/	16-2001#page1.tif		

source=SFC1P117A\_Assignment\_Inventor to Grand Central Networks\_8-16-2001#page4.tif source=SFC1P117A\_Assignment\_Inventor to Grand Central Networks\_8-16-2001#page5.tif source=SFC1P117A\_Assignment\_Inventor to Grand Central Networks\_8-16-2001#page6.tif source=SFC1P117A\_Assignment\_Inventor to Grand Central Networks\_8-16-2001#page7.tif

### ASSIGNMENT (Joint)

We, Lev Brouk, residing at 280 San Benito Way, San Francisco, CA 94127; Kenneth Norton, residing at 218 California Ave., Mill Valley, CA 94941; Jason Douglas, residing at 493 29<sup>th</sup> St., San Francisco, CA 94131; and Peter Panec, residing at 414 12<sup>th</sup> St., Santa Monica, CA 90402; (hereinafter each referred to as "Assignor") have made an invention relating to certain new and useful improvements in:

### SYSTEM AND METHOD FOR MAPPING OF SERVICES

set forth in an application for Letters Patent of the United States, which is a non-provisional application bearing Application No. 09/820,964 and filed on March 30, 2001; and

### / Delaware

WHEREAS, GRAND CENTRAL NETWORKS, INC., a corporation duly organized under and pursuant to the laws of California, and having its principal place of business at 275 Sacramento St., San Francisco, CA 94111 (hereinafter referred to as "the Assignee"), is desirous of acquiring the entire right, title, and interest in and to said invention(s), the right to file applications on said invention(s) and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon;

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignor has sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned invention(s), the right to file applications on said invention(s) and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale and assignment not been made;

AND for the same consideration, the Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignor is a lawful owner of the entire right, title, and interest in and to the invention(s) set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner herein set forth; AND for the same consideration, the Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns that the Assignor will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said invention(s) or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said invention(s) in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-inpart of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent or Patents for said invention(s), without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

AND the Assignor hereby requests the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignee, as the Assignee of said invention(s) and the Letters Patent to be issued thereon for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

Date: July 30, 2001	By:	fer 1	Lev Brouk	
			Ley Dibuk	
State of: F1 cm Cr				
County of: Paulo	-			
The preceding Assignment wa	s acknowledged bef	ore me this	30 dovor fuellet loct	
			S CHARLES S	
by LE	V ISKOUL			
	C		TP://	
My Commission Expires:	· · · · · · · · · · · · · · · · · · ·	Notary Public		
· ·			COUR D'ARVIL	-
Date:	By:	·····	¥7	
	•		Kenneth Norton	
State of:				
County of:			• •	
		· · · · · · · · · · · · · · · · · · ·	đan of	
The preceding Assignment wa	s acknowledged.def	ore me uns	day of	
by		······*		
My Commission Expires:	· · ·	Notary Public		

PATENT REEL: 032669 FRAME: 0504 AND for the same consideration, the Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns that the Assignor will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said invention(s) or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said invention(s) in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-inpart of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent or Patents for said invention(s), without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

AND the Assignor hereby requests the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignee, as the Assignee of said invention(s) and the Letters Patent to be issued thereon for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

Date:	By:
	Lev Brouk
State of:	
County of:	
The preceding Assignment was a	cknowledged before me this day of
My Commission Expires:	Notary Public
Date: _ C/20/01	By: Kenneth Norton
State of	
State of County of: The preceding Assignment was a by	cknowleddefore me this day of
by	CANOW RECEIPTE INE INS Gay OI _
My Commission Expires:	Notary Public

PATENT REEL: 032669 FRAME: 0505

ASSIGNMENT	Attorney Docket No.GRCN001/02US Page 3
Date: 6/20/2001 B	By: Jason Douglas
State of:	
County of:	
The preceding Assignment was acknowledged	politic this day of
by copy all	
- Jan	
My Commission Expires:	Notary Public
Date: $\frac{6/20/01}{1000000000000000000000000000000000$	By: Juti Dance
	Teter Panec
State of:	
County of:	anod
The preceding Assignment was acknowledged	Motore me this day of
County of: The preceding Assignment was acknowledged byby	
My Commission Expires:	Notary Public

98939 v1/RE 24CB011.DOC 060501/1448

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California	
County of San Francisco	) > ss.
	) §
aling an anni	Kristing S. Tamashiro, Notam
On WE W, WI, before me,	Krighner S. Tamaghiro, Notam
personally appeared Kannon	G NOTION
personally appeared	Name(s) of Signer(s)
· · · · · · · · · · · · · · · · · · ·	personally known to me
	vproved to me on the basis of satisfactory
	evidence
· · · · · · · · · · · · · · · · · · ·	
	to be the person (x) whose name (x) is/are
	subscribed to the within instrument and acknowledged to me that he/ehe/lheyrexecuted
	the same in his/her/their authorized
	capacity(hes), and that by his/her/their
	signature(y) on the instrument the person(y), or
KRISTINE S. TAMASHIRO	the entity upon behalf of which the person(s)
Commission # 1293051	acted, executed the instrument.
Son Francisco County	
My Comm. Expires Feb 4, 2005	WITNESS my hand and official seal.
and the stand and the stand the stand and the stand is a second stand	/ anom amasarro
Place Notary Seal Above	Signature of Notisry Public
	N / B
O	PTIONAL
Though the information below is not required by le	aw, it may prove valuable to persons relying on the document
ano coulo prevent rrauoulent removal a	ind realtachment of this form to another document.
Description of Attached Document	i  i  i  i  i  i  i  i  i  i
Title or Type of Document:	ALL ONLY WALL BUILD
Document Date: JUNU 20, 200	Number of Pages: 3
	5
Signer(s) Other Than Named Above:	Brouk, Jason Bonglas- and Poter Pance
Capacity(ies) Claimed by Signer Signer's Name: KOMOTV	POTER PANER
Capacity(ies) Claimed by Signer	
Signer's Name: KC/WIC/V	C.G. NUY IVVI RIGHT HIDREPRINT
X Individual	Top of thumb here
Corporate Officer — Title(s):	
Partner — D Limited O General	
Attorney in Fact     Trustee	
Guardian or Conservator	
~ 1.	totar Fance I.G. NORTON Top of thumb here
Signer Is Representing:NA	[
•	n n n n n n n n n n n n n n n n n n n

PATENT REEL: 032669 FRAME: 0507

## CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of Cal	lifornia		<u>۱</u>		
	SAIN AMOUT	<b>4</b> 0	> ss.		le l
County of	San Manuz	W	J		
on <u>UNC</u>	2 90, 2001, before r	ne, KNGTIN	)S. Tama	shiro, NO	an A
		1 Dougla	and Tills of Officer (e.g., "Jar	te Doe, Notary Public')	
personally a	appeared	· NOVIEJUN	U ne(s) of Signer(s)	h	······
		🗍 pers	onally known to m	ne	
		2 prov	ed to me on the	e basis of satis	sfactory
		<b>v</b> eviden	)e		
		to be	the persono v	whose nominal	ielara
		euberr	ibed to the wi	ithin instrume	ot and
			vledged to me that		
			<b>•</b>		horized
	·	capaci	ty(tes), and the	at by his/h	er/their n(e), or rson(s)
-			ure(s) on the instru		n(e), or
1 PA	KRISTINE S. TAMASHIRO Commission # 1293051	5	ity upon behalf o		rson(s)
1	Notary Public - California	z acted,	executed the inst	rument.	
	<ul> <li>San Francisco County My Comm. Expires Feb 4, 2005</li> </ul>		SS my hand and	official seal.	8
	114 CONTRACTOR 100 - 2200		A. 0		
	·		namala	My	
	Place Notary Seal Above		J Signature of M	lotary Public	i i
		- OPTIONAL	•••••••••••••••••••••••••••••		
Though the	information below is not require			s relying on the doci	ument
	and could prevent fraudulent ren		ent of this form to anot	ther document.	. Å
Description	1 of Attached Document	t i Zima .	Shotom and	d Norhod f	· •
Title or Type	of Attached Document of Document: 783101111	rant Wint	-) MAPPWER	of Sarrico	§
	(The and an a	<i>2</i> 001		12	
Document Da	ate: JUNO 80, 2	wi	Number of Pa	ges:	
Signarie) Oth	er Than Named Above: K	annam S.	Norton: 1	al Prink	and
യയ്യായുടു യാ	IVI ITALI PERIODI TAUNA		Par Pine	Y /	
Capacity(ie	s) Claimed by Signer			$\sim$	
Signer's Nam	ie: UNDY 2	Mylas-		RIGHT DI	IMSPRINT
X Individual		$\bigcirc$		Top of the	amb here
Corporate	) Officer — Title(s):		****		
LJ Partner -	- LJ Limited LJ General				
LI Allomey I	n raci				
Guardian	or Conservator				
Other;					
	ate:Ar			/	
Signer Is Rep	presenting: N/H			L	\$

## CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of Ca		ss.
County of	San Francisa	£ } ***
On JUN	10, 20, 200 before r	me, Kngnw S. Tamachiro, Notan P
personally	appeared Peter	Name(s) of Signer(s)
		<ul> <li>personally known to me</li> <li>proved to me on the basis of satisfactory evidence</li> </ul>
	KRISTINE S. TAMASHIRO Commission # 1293051	to be the person(s) whose name(s) is/are- subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ids), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.
	Notary Public - California San Francisco County My Comm. Expines Feb 4, 2005	Acted, executed the instrument.
	Pisce Notary Seat Above	- OPTIONAL
		ed by law, it may prove valuable to persons relying on the document moval and realtachment of this form to another document.
Descriptio	on of Attached Document	int (Jaint) Mapping of Services
Document D	Date: JUNE 20,	2001 Number of Pages: 3
Signer(s) O	ther Than Named Above:	av BNOUK, Kannoth North and Just Brown Bouglas
Capacity(i	es) Claimed by Signer	Thom Boughas
Signer's Na	me: <u>POTOV +0</u>	MCC RIGHT THUMBPRINT
Z Individua		Top of thumb here
	te Officer Title(s):	
Partner -	- C Limited C General	
Allomey     Trustee	RFF CR.S.	
	n or Conservator	
Other:		
	epresenting: NA	MCC REFIT THUMBORINT OF SIGNER Top of ithumb there

**RECORDED: 04/14/2014**