PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6186682

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
GEORGI M. CHALAKOV	06/14/2018
SHANE KUMAR MAINALI	06/06/2018
THOMAS LEO MARQUARDT	06/14/2018
ZICHEN SUN	06/05/2018
MANEESH SAH	06/18/2018
ESFANDIAR MANII	06/13/2020
SAURABH PANT	06/13/2018
DANA YULIAN KABAN	06/08/2018
SAHER B. AHWAL	06/13/2018
JUN CHEN	06/05/2018
DA ZHOU	06/13/2018
AMIT PRATAP SINGH	06/22/2018
JUNHUA GU	06/13/2020
SHAOYU ZHANG	06/06/2018
WEI CHEN	06/06/2018
JINGCHAO ZHANG	06/06/2018
QUAN ZHANG	06/20/2018
ARILD EINAR SKJOLDSVOLD	06/13/2018

RECEIVING PARTY DATA

Name:	MICROSOFT TECHNOLOGY LICENSING, LLC
Street Address:	ONE MICROSOFT WAY
City:	REDMOND
State/Country:	WASHINGTON
Postal Code:	98052

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16921568

CORRESPONDENCE DATA

PATENT REEL: 053132 FRAME: 0948

506139952

Fax Number: (425)936-7329

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: 425-707-9382

Email: usdocket@microsoft.com

Correspondent Name: MICROSOFT CORPORATION

Address Line 1: ONE MICROSOFT WAY

Address Line 4: REDMOND, WASHINGTON 98052

ATTORNEY DOCKET NUMBER:	404459-US-CNT
NAME OF SUBMITTER:	SYED S. AHMED
SIGNATURE:	/Syed S. Ahmed, #64,587/
DATE SIGNED:	07/06/2020

Total Attachments: 36

source=404459-US-NP Executed Assignment (1)#page1.tif source=404459-US-NP Executed Assignment (1)#page2.tif source=404459-US-NP Executed Assignment (1)#page3.tif source=404459-US-NP Executed Assignment (1)#page4.tif source=404459-US-NP Executed Assignment (1)#page5.tif source=404459-US-NP Executed Assignment (1)#page6.tif source=404459-US-NP Executed Assignment (1)#page7.tif source=404459-US-NP Executed Assignment (1)#page8.tif source=404459-US-NP Executed Assignment (1)#page9.tif source=404459-US-NP Executed Assignment (1)#page10.tif source=404459-US-NP Executed Assignment (1)#page11.tif source=404459-US-NP Executed Assignment (1)#page12.tif source=404459-US-NP Executed Assignment (1)#page13.tif source=404459-US-NP Executed Assignment (1)#page14.tif source=404459-US-NP Executed Assignment (1)#page15.tif source=404459-US-NP Executed Assignment (1)#page16.tif source=404459-US-NP Executed Assignment (1)#page17.tif source=404459-US-NP Executed Assignment (1)#page18.tif source=404459-US-NP Executed Assignment (1)#page19.tif source=404459-US-NP Executed Assignment (1)#page20.tif source=404459-US-NP Executed Assignment (1)#page21.tif source=404459-US-NP Executed Assignment (1)#page22.tif source=404459-US-NP Executed Assignment (1)#page23.tif source=404459-US-NP Executed Assignment (1)#page24.tif source=404459-US-NP Executed Assignment (1)#page25.tif source=404459-US-NP Executed Assignment (1)#page26.tif source=404459-US-NP Executed Assignment (1)#page27.tif source=404459-US-NP Executed Assignment (1)#page28.tif source=404459-US-NP Executed Assignment (1)#page29.tif source=404459-US-NP Executed Assignment (1)#page30.tif source=404459-US-NP Executed Assignment (1)#page31.tif source=404459-US-NP Executed Assignment (1)#page32.tif source=404459-US-NP Executed Assignment (1)#page33.tif

> PATENT REEL: 053132 FRAME: 0949

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PATENT REEL: 053132 FRAME: 0950

I, <u>Georgi M. Chalakov</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGNOR	hereby	autho	orizes,	and	reque	ests,
	ASSI	GNE	E'S lega	l representa	tive, Micı	rosoft	Techno	logy	Licens	ing,
	LLC,	One	Micros	oft Way, Red	mond, Wa	ashingt	ton 980)52 (A	SSIGN	EE'S
	LEGA	AL R	EPRESEN	ITATIVES), to	insert h	iere in	paren	these	s (filed	on
	<u>June</u>	22,	2018	and given	Applicati	on No	. <u>16/0</u>	15,77	<u>74</u> by	the
	follo	wing	Office <u>l</u>	<u>JS – United S</u>	tates Pate	ent and	<u> Trader</u>	nark (Office)	this
	APPL	_ICA	ΓΙΟΝ's Α	pplication N	o., filing o	date, ai	nd Offic	e, wh	en kno	wn;
	was	filed	on		and was (given <i>A</i>	Applicat	tion		
	No_			by the f		_				

Microsoft Technology Licensing, LLC, a Washington limited liability company, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No. 16/921,568	Filing Date July 6, 2020	Office	
16/921,568	July 6, 2020	USPTO	

Page 1 of 2

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR, the ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, ASSIGNOR's entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

Georgi M. Chalakov

Printed Name in English

Gonorgi Marive Language
(if other than English)

I, <u>Shane Kumar Mainali</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGNOR	hereby	authorize	s, and	reque	ests,
	ASSI	GNE	E'S legal	representa	tive, Micr	osoft Tech	nology	Licens	ing,
	LLC,	One	Microso	oft Way, Redi	nond, Wa	ashington 9	8052 (4	ASSIGNI	EE'S
	LEGA	AL R	EPRESEN	TATIVES), to	insert h	ere in par	enthese	s (filed	on
	<u>June</u>	22,	, 2018	and given	Application	on No. <u>16</u>	<u>/015,77</u>	<u>74</u> by	the
	follo	wing	office <u>L</u>	JS – United S	tates Pate	ent and Trac	<u>lemark</u>	Office)	this
	APPL	-ICA	ΓΙΟΝ's A	pplication No	o., filing o	late, and O	fice, wh	en kno	wn;

\square was filed on $__$	and was given Application
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En MI	06/06/2018
Inventor's Signature	Date
Shane Kumar Mainali	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, <u>Thomas Leo Marquardt</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\times	will	be	filed.	ASSIGNOR	here	by au	uthoriz	es, a	and	reque	sts,
	ASSI	GNE	E'S legal	representa	itive, N	dicros	oft Ted	chnolo	ogy I	_icens	ing,
	LLC,	One	Microso	ft Way, Red	lmond,	, Wash	ington	9805	2 (A	SSIGNI	EE'S
	LEGA	AL RI	EPRESEN [®]	TATIVES), t	o inse	rt here	e in pa	renth	eses	(filed	on
	<u>June</u>	22,	2018	and given	Applic	cation	No. <u>1</u>	6/01	5,77·	<u>4</u> by	the
	follo	wing) Office <u>L</u>	<u> IS – United S</u>	States F	atent ²	and Tra	<u>adem</u>	ark C	office)	this
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Application No. 16/921,568	Filing Date July 6, 2020	Office	
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MS Docket No.: 404459-US-NP

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Thomas Warquardt	6/14/18
Inventor's Signature	Date
Thomas Leo Marquardt	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, Zichen Sun, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGNOR	hereby	authorize	s, and	reque	ests,
	ASSI	GNE	E'S legal	representa	tive, Micr	osoft Tech	nology	Licens	ing,
	LLC,	One	Microso	oft Way, Redi	nond, Wa	ashington 9	8052 (4	ASSIGNI	EE'S
	LEGA	AL R	EPRESEN	TATIVES), to	insert h	ere in par	enthese	s (filed	on
	<u>June</u>	22,	, 2018	and given	Application	on No. <u>16</u>	<u>/015,77</u>	<u>74</u> by	the
	follo	wing	office <u>L</u>	JS – United S	tates Pate	ent and Trac	<u>lemark</u>	Office)	this
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Filing Date	Office
July 6, 2020	USPTO
	Filing Date

Page 1 of 2

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8 May	06/05/2018
Inventor's Signature	Date
Zichen Sun	孙子晨
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, <u>Maneesh Sah</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGNOR	hereby	autho	rizes,	and	reque	sts,
	ASSI	GNE	E'S lega	l representat	ive, Micr	osoft 7	echno	logy	Licens	ing,
	LLC,	One	Microso	oft Way, Redr	nond, Wa	ashingto	on 980)52 (A	SSIGN	EE'S
	LEGA	AL R	EPRESEN	TATIVES), to	insert h	ere in	parent	theses	s (filed	on
	<u>June</u>	22	, 2018	and given A	Application	on No.	<u>16/0</u>	15,77	<u>'4</u> by	the
	follo	wing	office <u>l</u>	JS – United St	tates Pate	nt and	<u>Trader</u>	nark (Office)	this
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	<u> </u>
Inventor's Signature	Date
Maneesh Sah	
Printed Name in English	Printed Name in Native Language (if other than English)

I, Esfandiar Manii, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITHDISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

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	VVIII	ne	meu.	ASSIGNOR	Hereby	authorizes	, and	reque	:313,
	ASSI	GNE	E'S legal	representat	ive, Micr	osoft Tech	nology	Licens	ing,
	LLC,	One	Microso	oft Way, Redr	nond, Wa	ashington 9	8052 (4	ASSIGN	EE'S
	LEGA	AL RI	EPRESEN [®]	TATIVES), to	insert h	ere in pare	enthese	s (filed	on
	<u>June</u>	22,	2018	and given /	Application	on No. <u>16</u>	/015,7	<u>74</u> by	the
	follo	wing	Office <u>L</u>	<u> IS – United St</u>	ates Pate	ent and Trad	emark	Office)	this
	APPL	-ICA	ΓΙΟΝ's Α	pplication No	o., filing o	late, and Of	fice, wh	en kno	wn;

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Inventor's Signature

Esfandiar Manii

Printed Name in English

ate

Printed Name in Native Language (if other than English)

I, <u>Saurabh Pant</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

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	ASSI	GNE	E'S legal	representat	ive, Micr	osoft	Techno	logy	Licens	ing,
	LLC,	One	Microso	ft Way, Redr	nond, Wa	shingt	ton 980)52 (A	SSIGN	EE'S
	LEGA	AL R	EPRESEN ⁻	ΓΑΤΙVES), to	insert h	ere in	parent	theses	(filed	on
	<u>June</u>	22,	2018	and given /	Application	on No	. <u>16/0</u>	15,77	<u>'4</u> by	the
	follo	wing) Office <u>U</u>	<u>S – United St</u>	ates Pate	nt and	Trader	nark (Office)	this
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gurash Pont	06/13/2018
Inventor's Signature	Date
Saurabh Pant	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, <u>Dana Yulian Kaban</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

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	LLC,	One	Microso	ft Way, Redr	nond, Wa	ashingto	n 980	52 (A	SSIGN	EE'S
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	16/08/20K
Invertion Signature	Date
/	<u>, </u>
Dana Yulian Kaban	122 14.11, 313
Printed Name in English	Printed/Name/in Native Language
	(if other than English)

I, <u>Saher B. Ahwal</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "<u>HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME</u> RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASS	IGNOR	hereb	у а	uthoi	rizes,	and	req	ues	its,
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	LLC,	One	Micros	oft Wa	ıy, Red	mond,	Wash	ingt	on 980)52 (A	ASSIG	NE	E'S
	LEGA	AL RI	EPRESEN	ITATI\	/ES), to	insert	here	e in	paren	these	s (fil	ed	on
	<u>June</u>	22,	2018	and	given	Applica	ation	No.	<u> 16/0</u>	15,7	<u>74</u> b	y t	the
	follo	wing	Office	<u>US – U</u>	<u>nited S</u>	tates Pa	<u>atent</u>	and '	<u>Trade</u> ı	<u>mark </u>	Offic	<u>e</u>) tl	his
	APPL	_ICA7	ΓΙΟΝ's A	Applica	ation N	o., filin	g dat	e, an	d Offic	ce, wh	ien ki	nov	vn;
	was	filed	on			and wa	s giv	en A	pplica	tion			

Microsoft Technology Licensing, LLC, a Washington limited liability company, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

No ______ by the following Office

ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office	
16/921,568	July 6, 2020	USPTO	

MS Docket No.: 404459-US-NP

. 4: 1. -

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ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

Inventor's Signature

Saher B. Ahwal

Printed Name in English

Printed Name in Native Language
(if other than English)

I, <u>Jun Chen</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGN	IOR	hereby	auth	orizes,	and	reque	ests,	
	ASSI	GNE	E'S lega	l represe	ntati	ve, Mic	rosoft	Techno	ology	Licens	ing,	
	LLC,	One	Micros	oft Way,	Redm	iond, W	ashing/	ton 980)52 (A	ASSIGN	EE'S	
	LEGA	AL RI	EPRESEN	ITATIVES:), to	insert	here ir	paren	these	s (filed	on	
	<u>June</u>	22,	2018	and giv	en A	pplicat	ion No	o. <u>16/0</u>	15,77	<u>74</u> by	the	
	follo	wing	Office <u></u>	<u>US – Unite</u>	ed Sta	<u>ates Pat</u>	ent and	<u>d Trade</u> ı	<u>mark (</u>	Office)	this	
	APPLICATION's Application No., filing date, and Office, when known											
	was	filed	on		a	nd was	given .	Applica	tion			

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No ______ by the following Office

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Application No. 16/921,568	Filing Date	Office	
16/921,568	July 6, 2020	USPTO	

Page 1 of 2

MS Docket No.: <u>404459-US-NP</u>

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下年诺	6/5/18
Inventor's Signature	Date
Jun Chen	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, <u>Da Zhou</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGNOR	hereby	authorize	s, and	reque	ests,
	ASSI	GNE	E'S legal	representa	tive, Micr	osoft Tech	nology	Licens	ing,
	LLC,	One	Microso	oft Way, Redi	nond, Wa	ashington 9	8052 (4	ASSIGNI	EE'S
	LEGA	AL R	EPRESEN	TATIVES), to	insert h	ere in par	enthese	s (filed	on
	<u>June</u>	22,	, 2018	and given	Application	on No. <u>16</u>	<u>/015,77</u>	<u>74</u> by	the
	follo	wing	office <u>L</u>	JS – United S	tates Pate	ent and Trac	<u>lemark</u>	Office)	this
	APPL	-ICA	ΓΙΟΝ's A	pplication No	o., filing o	late, and O	fice, wh	en kno	wn;

\square was filed on $__$	and was given Application
No	by the following Office
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Da.Zhan	
	6/13/2018
Inventor's Signature	Date
Da Zhou	周达
Printed Name in English	Printed Name in Native Language
5	(if other than English)

MS Docket No.: <u>404459-US-NP</u>

I, <u>Amit Pratap Singh</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGNO	R her	eby a	autho	rizes,	and	reque	sts,
	ASSI	GNE	E'S legal	represent	ative,	Micro	soft ⁻	Techno	logy	Licens	ing,
	LLC,	One	Microso	ft Way, Re	dmon	d, Was	hingt	on 980	52 (A	SSIGN	EE'S
	LEG/	AL R	EPRESEN ⁻	TATIVES),	to ins	ert he	re in	parent	heses	s (filed	on
	<u>June</u>	22,	2018	and given	Appl	icatior	n No.	16/0	15,77	<u>4</u> by	the
	follo	wing	Office <u>U</u>	<u> IS – United</u>	States	<u>Paten</u>	t and	<u>Trader</u>	nark (Office)	this
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16/921,568	July 6, 2020	USPTO	

Page 1 of 2

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Abrila				2et 8	
inventor's Signature		Date	**************************************		•••••
Amit Pratap Singh			s a la l		
Printed Name in English			Name in N	ative Languag	je
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I, Junhua Gu, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGNOR	hereby	autho	orizes,	and	reque	sts,
	ASSI	GNE	E'S legal	representat	ive, Micr	rosoft	Techno	logy	Licens	ing,
	LLC,	One	Microso	ft Way, Redr	nond, Wa	ashing	ton 980)52 (A	ASSIGN	EE'S
	LEGA	AL R	EPRESEN ⁻	TATIVES), to	insert h	iere in	paren	these	s (filed	on
	<u>June</u>	22.	<u>, 2018</u>	and given .	Application	on No	. <u>16/0</u>	15,77	<u>74</u> by	the
	follo	wing	g Office <u>L</u>	<u> IS – United St</u>	tates Pate	ent and	l Trader	<u>mark (</u>	Office)	this
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\square was filed on $__$	and was given Application
No	by the following Office
u	n.

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Junhua Gru	06/13/2018
Inventor's Signature	Date
Junhua Gu	顾骏骅
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, <u>Shaoyu Zhang.</u> ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGN	OR h	ereby	autho	rizes,	and	reque	ests,
	ASSI	GNE	E'S legal	represei	ntative	e, Micr	osoft	Techno	ology	Licens	ing,
	LLC,	One	Microso	oft Way, R	edmo	nd, Wa	shingt	on 980)52 (A	SSIGN	EE'S
	LEGA	AL RI	EPRESEN	TATIVES)	to ir	isert h	ere in	paren	these	s (filed	lon
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MS Docket No.: 404459-US-NP

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Shaoyu Zhang Inventor's Signature	6/6/2018 Date
Shaoyu Zhang Printed Name in English	张 纪 宁 Printed Name in Native Language (if other than English)

I, <u>Wei Chen</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

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	LEG/	AL R	EPRESEN ⁻	TATIVES), to	o insert h	nere in	parent	heses	(filed	on
	<u>June</u>	22,	2018	and given	Applicati	on No.	. <u>16/0</u>	15,77	<u>4</u> by	the
	follo	wing	Office <u>U</u>	S – United S	tates Pate	ent and	Trader	nark C	Office)	this
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Page 1 of 2

MS Docket No.: 404459-US-NP

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Wei Chen	6/6/2018
Inventor's Signature	Date يل
Wei Chen	The Be
Printed Name in English	Printed Name in Native Language (if other than English)

I, <u>Jingchao Zhang</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITHDISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGNOR	hereby	autho	rizes,	and	reque	sts,
	ASSI	GNE	E'S legal	representat	ive, Micr	osoft	Techno	logy	Licens	ing,
	LLC,	One	Microso	ft Way, Redr	nond, Wa	ashingt	ton 980)52 (A	SSIGN	EE'S
	LEGA	AL R	EPRESEN ⁻	TATIVES), to	insert h	ere in	parent	theses	s (filed	on
	<u>June</u>	22.	2018	and given /	Application	on No	. <u>16/0</u>	15,77	<u>4</u> by	the
	follo	wing	Office <u>U</u>	<u> S – United St</u>	ates Pate	nt and	Trader	nark (Office)	this
	APPL	_ICA	ΓΙΟΝ's Α _Ι	oplication No	o., filing o	late, ar	nd Offic	e, wh	en kno	wn;

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Page 1 of 2

MS Docket No.: <u>404459-US-NP</u>

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Jing chao Zhang Inventor's Signature	6/6/2018 Date
Jingchao Zhang Printed Name in English	子长生之 Printed Name in Native Language (if other than English)

I, <u>Quan Zhang</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGNOR	hereby	autho	rizes,	and	reque	ests,
	ASSI	GNE	E'S legal	representa	tive, Mici	rosoft 1	Гесһпо	logy	Licens	ing,
	LLC,	One	Microso	oft Way, Red	mond, Wa	ashingte	on 980)52 (A	ASSIGN	EE'S
	LEG/	AL RI	EPRESEN	TATIVES), to	o insert h	nere in	parent	these	s (filed	l on
	<u>June</u>	22,	2018	and given	Applicati	on No.	<u>16/0</u>	15,77	<u>74</u> by	the
	follo	wing	Office <u>L</u>	JS – United S	tates Pate	ent and	<u>Trader</u>	nark (Office)	this
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Application No.	Filing Date	Office	
Application No. 16/921,568	July 6, 2020	USPTO	

PATENT ASSIGNMENT MS Docket No.: 404459-LIS-NP

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:		
	77	Jun . 20, 20, 8
	Inventor's Signature	Date
	Quan Zhang	38/2
	Printed Name in English	Printed Name in Native Language
		(if other than English)

I, <u>Arild Einar Skjoldsvold</u>, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "HIERARCHICAL NAMESPACE SERVICE WITH DISTRIBUTED NAME RESOLUTION CACHING AND SYNCHRONIZATION" ("APPLICATION"), which:

\boxtimes	will	be	filed.	ASSIGNOR	hereby	autho	rizes,	and	reque	sts,
	ASSI	GNE	E'S legal	representat	ive, Micr	osoft T	Гесһпо	logy	Licensi	ing,
	LLC,	One	Microso	ft Way, Redr	nond, Wa	ıshingto	on 980	52 (A	SSIGNI	EE'S
	LEGA	AL R	EPRESEN ⁻	ΓΑΤΙVES), to	insert h	ere in	parent	heses	(filed	on
	<u>June</u>	22.	, 2018	and given /	Application	on No.	<u>16/0</u>	15,77	<u>'4</u> by	the
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M GUU	6/13/2018
Inventor's Signature	Date
Arild Einar Skjoldsvold	
Printed Name in English	Printed Name in Native Language
	(if other than English)