10/22/2019 505734806

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5781620

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
PENGSHUAI WANG	05/03/2017
YANG LIU	05/03/2017
XIN TONG	05/03/2017

#### **RECEIVING PARTY DATA**

Name:	MICROSOFT TECHNOLOGY LICENSING, LLC
Street Address:	ONE MICROSOFT WAY
City:	REDMOND
State/Country:	WASHINGTON
Postal Code:	98052-6399

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16606653

#### CORRESPONDENCE DATA

Fax Number: (612)332-9081

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: 6123325300

Email: crogers@merchantgould.com MERCHANT & GOULD P.C. **Correspondent Name:** 

Address Line 1: P.O. BOX 2903

Address Line 4: MINNEAPOLIS, MINNESOTA 55402

NAME OF SUBMITTER:	TIMOTHY B. SCULL
SIGNATURE:	/Timothy B. Scull/
DATE SIGNED:	10/22/2019

#### **Total Attachments: 6**

source=Assignment\_14917\_3728USWO#page1.tif source=Assignment\_14917\_3728USWO#page2.tif source=Assignment\_14917\_3728USWO#page3.tif source=Assignment\_14917\_3728USWO#page4.tif source=Assignment\_14917\_3728USWO#page5.tif

> **PATENT** REEL: 050790 FRAME: 0620 505734806

source=Assignment\_14917\_3728USWO#page6.tif

PATENT REEL: 050790 FRAME: 0621

## PATENT ASSIGNMENT MS Docket No.: 362918.01

inventor of subject matter (		•
ASSIGNEE'S legal LLC, One Microsof LEGAL REPRESEN on No. Office	ASSIGNOR hereby auth representative, Microsoft ft Way, Redmond, Washing TATIVES), to insert here and by	Technology Licensing, gton 98052 (ASSIGNEE'S in parentheses (filed given Application the following ) this APPLICATION's
No <u>2017102973</u>	28, 2017 and was given A 00.4 by the following Offi f the People's Republic of	ce " <u>State Intellectual</u>
Microsoft Technology Lidbehalf of itself and its successifications of acquiring, the entire right of priority, in the INVENTIFICATION patents derived therefrom, sucfor the United States, its to DERIVATIVES"));	ssors and assigns ("ASSIO re and exclusive rights, ti ON and the APPLICATION of h as continuing applicatio	tle and interest, including the (and all other applications and ns, in whole or in part, in and
ASSIGNOR hereby REPRESENTATIVES to insert the following table for any APPLICA	• •	g date, and Office into the
Application No. 16/606653	Filing Date 2019-10-18	Office US Patent and Trademark Office

Page 1 of 2

PATENT ASSIGNMENT		MS Docket No.:	362918.01	
			***	

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).

王明到中	2017. 5.3
Inventor's Signature	Date
Pengshuai Wang	正鵬帅
Printed Name in English	Printed Name in Native Language
	(if other than English)

# PATENT ASSIGNMENT MS Docket No.: 362918.01

l <u>Yang Liu</u> ("AS	SSIGNOR") am the origi	nal inventor or an o	riginal joint inventor of
•		•	ent application entitled
"OCTREE-BASED CON	NVOLUTIONAL NEURAL	<u>NETWORK</u> " ("APPLIC	CATION"), which:
_			
□ will be	e filed. ASSIGNOR	hereby authorizes,	and requests,
ASSIGNI	EE'S legal representativ	ve, Microsoft Techn	ology Licensing,
LLC, On	ie Microsoft Way, Redm	ond, Washington 98	052 (ASSIGNEE'S
LEGAL	REPRESENTATIVES), to	insert here in pa	rentheses (filed
on		and given	Application
No.		by the	following
Office		) this	APPLICATION's
Applica	tion No., filing date, an	d Office, when know	'n;
_			
🗵 was file	d on <u>April 28, 2017</u> and	d was given Applicat	ion No
<u>201710</u>	<u>297300.4</u> by the follow	ving Office " <u>State In</u>	<u>tellectual</u>
<u>Property</u>	y Office of the People's	Republic of China "	,
behalf of itself and desirous of acquiring right of priority, in th patents derived there	its successors and asg, the entire and exclusive INVENTION and the Action, such as continuing	ssigns ("ASSIGNEE"), sive rights, title and APPLICATION (and all ng applications, in v	ed liability company, on is entitled to, and is interest, including the lother applications and whole or in part, in and untries ("APPLICATION"
ASSIGNOR I	hereby authorizes,	and requests,	ASSIGNEE'S LEGAL
REPRESENTATIVES to	insert the Application	on No., filing date	, and Office into the
following table for an	y APPLICATION DERIVA	TIVES after they are	known;
Application No.	Filing Date	Office	!
16/606653	2019-10-18	US Pate	nt and Trademark Office

PATENT.	ASSIGNMENT	MS Docket No.:	362918.01

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).

	2017. \$7.3
Inventor's Signature	Date
Yang Liu	刘祥
Printed Name in English	Printed Name in Native Language (if other than English)

## PATENT ASSIGNMENT MS Docket No.: 362918.01

subject matter ("INVEN	TION") disclosed and/or c	nventor or an original joint inventor of laimed in a patent application entitled <u>WORK</u> " ("APPLICATION"), which:
LLC, One LEGAL RI on _ No. Office _	'S legal representative, M Microsoft Way, Redmond, EPRESENTATIVES), to inse 	oy authorizes, and requests, licrosoft Technology Licensing, Washington 98052 (ASSIGNEE'S ert here in parentheses (filed nd given Application by the following) this APPLICATION's ice, when known;
2017102	on <u>April 28, 2017</u> and was <u>97300.4</u> by the following Office of the People's Rep	Office <u>"State Intellectual</u>
behalf of itself and it desirous of acquiring, right of priority, in the patents derived therefr	s successors and assignates the entire and exclusive relative in the APPLIC om, such as continuing approximation of the APPLIC om, such as continuing approximation and the APPLIC om, such as continuing approximation and the APPLIC om, such as continuing approximation and the approximat	ashington limited liability company, on s ("ASSIGNEE"), is entitled to, and is rights, title and interest, including the CATION (and all other applications and oplications, in whole or in part, in and all foreign countries ("APPLICATION
REPRESENTATIVES to		d requests, ASSIGNEE'S LEGAL o., filing date, and Office into the Safter they are known:
Application No. 16/606653	Filing Date 2019-10-18	Office US Patent and Trademark Office

Page 1 of 2

PATENT ASSIG	INIMIE'N I	MIQ TOCKE	EUNO.:	<u> 362918.01</u>	
				<del>.</del>	_
					1

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"));

THE A COLOR IN CONTROL

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).

16 GZ	2017/5/2		
Inventor's Signature	Date		
Xin Tong	童欣		
Printed Name in English	Printed Name in Native Language (if other than English)		