505477142 05/15/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5523946

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SAMANEH ABBASI MOGHADDAM	04/15/2019
JIULING WANG	04/12/2019
CHIH CHENG PAUL YUAN	03/29/2019
LACHLAN GREEN	05/08/2019

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:	16366990

CORRESPONDENCE DATA

Fax Number:

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.

Email: request@slwip.com

Correspondent Name: SCHWEGMAN LUNDBERG & WOESSNER P.A.

Address Line 1: P.O. BOX 2938

Address Line 4: MINNEAPOLIS, MINNESOTA 55402

ATTORNEY DOCKET NUMBER:	902472-US-NP 3080.K75US1
NAME OF SUBMITTER:	TAMERAE ROBINSON
SIGNATURE:	/Tamerae Robinson/
DATE SIGNED:	05/15/2019

Total Attachments: 9

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PATENT 505477142 REEL: 049183 FRAME: 0255

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source=3080K75US1_Assignment#page7.tif
source=3080K75US1_Assignment#page8.tif
source=3080K75US1_Assignment#page9.tif

PATENT REEL: 049183 FRAME: 0256

RECORDATION FORM COVER SHEET PATENTS ONLY

Patent and Trademark Office Attv Ref/Docket No.: 902472-US-NP (3080,K75US1) To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof. Name and address of receiving party(ies): 1. Name of conveying party(ies): Name: Microsoft Technology Licensing, LLC Samaneh Abbasi Moghaddam, Jiuling Wang, Street Address: One Microsoft Way Chih Cheng Paul Yuan, Lachlan Green Additional name(s) of conveying party(ies) attached? City: Redmond State: WA Zip: 98052 Country: United States of America []Yes [X]No Additional name(s) & address(es) attached? []Yes [X]No 3. Nature of conveyance: [X] Assignment [] Merger [] Security Agreement [] Change of Name [] Other Execution Date: <u>April 15, 2019</u>, <u>April 12, 2019</u>, <u>March 29, 2019</u>, <u>May 8, 2019</u> 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s) B. Patent No.(s) Serial No. 16/366,990 Additional numbers attached? []Yes [X]No 6. Total number of applications and patents involved: 1 5. Name and address of party to whom correspondence concerning document should be mailed: 7. Total fee (37 CFR 3.41):\$ 0.00 Name: Marc S. Hanish [[Enclosed [Authorized to be charged to deposit account 19-Address: 0743 Schwegman Lundberg & Woessner, P.A. P.O. Box 2938 Please charge any additional fees or credit any over Minneapolis, Minnesota 55402 payments to our Deposit Account No.: 19-0743 DO NOT USE THIS SPACE Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. 5/13/19 Marc S. Hanish/Reg. No. 42,626 Name of Person Signing Date Total number of pages including cover sheet: 9 Mail documents to be recorded with required cover sheet information to: **Commissioner of Patents and Trademarks** Mail Stop Assignment Recordation Services

P.O. Box 1450

Alexandria, VA 22313-1450

PATENT REEL: 049183 FRAME: 0257

original joint	inventor of subjec	t matter ("INVENTION") d	the original inventor or an isclosed and/or claimed in a MENDATION SYSTEMS", which:
	ASSIGNEE'S legal r LLC, One Microsoft LEGAL REPRESENTA on the following Of	ASSIGNOR hereby authorepresentative, Microsoft Way, Redmond, Washingt ATIVES), to insert here and given Application fice and siven Application of the polication of the	Technology Licensing, ton 98052 (ASSIGNEE'S in parentheses (filed Noby) this
		27, 2019 and was given A following Office "US Pater	
behalf of itsel of acquiring, priority, in the derived there	f and its successors the entire and exc e INVENTION and th from, such as cont	and assigns ("ASSIGNEE"), clusive rights, title and in ne APPLICATION (and all o inuing applications, in wh	limited liability company, on, is entitled to, and is desirous terest, including the right of ther applications and patents nole or in part, in and for the PLICATION DERIVATIVES"));
to insert the	•	ling date, and Office into	EE'S LEGAL REPRESENTATIVES the following table for any
Application N	vo.	Filing Date	Office

MS Docket No.: 902472-US-NP

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).

Samunel Abbas: Noghadler Inventor's Signature	<u>Apr 15 2019</u>
i inventor's Signature	Date
Samaneh Abbasi Moghaddam	
Printed Name in English	Printed Name in Native Language
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}	C.C. and a superior of the last
	(if other than English)

IJ	iuling \	Wang	("ASSIC	inor")	am	the	origina	al is	nvento	or o	r an	ori	ginal	joint	inventor
of subjec	t matte	er ("IN"	VENTIC	N") di:	sclos	sed a	and/or	cla	imed	in a	pate	ent:	appli	cation	entitled
"DEBUGG	ING TO	<u>OOL FO</u>	<u>OR REC</u>	<u>Omme</u>	NDA	MIQ	<u>N SYST</u>	EM	l∑", wl	nich	s K				

will be filed. ASSIGNOR hereby authorizes, and requests
ASSIGNEE'S legal representative, Microsoft Technology Licensing
LLC, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S
LEGAL REPRESENTATIVES), to insert here in parentheses (filed
on and given Application No by
the following Office
APPLICATION's Application No., filing date, and Office, when known
was filed on March 27, 2019 and was given Application No

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"));

16/366,990 by the following Office "US Patent 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
		1.7

MS Docket No.: 902472-US-NP

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"));

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my vvy	04/12/2018
Inventor's Signature	Date
Jiuling Wang	
Printed Name in English	Printed Name in Native Language
	(if other than English)

subject matter ("	'INVENTION") disclosed	and/or claimed in a patent
ASSIGNEE'S legal LLC, One Microsof LEGAL REPRESENT on the following O	representative, Microsoft t Way, Redmond, Washing 'ATIVES), to insert here and given Applicatior ffice	Technology Licensing, gton 98052 (ASSIGNEE'S in parentheses (filed i No
If and its successors the entire and excension the entire and excension if its territories, and	s and assigns ("ASSIGNEE") clusive rights, title and in he APPLICATION (and all o tinuing applications, in wh all foreign countries ("AP	, is entitled to, and is desirous iterest, including the right of other applications and patents nole or in part, in and for the PLICATION DERIVATIVES"));
		o the following table for any
No.	Filing Date	Office
	subject matter ('ntitled "DEBUGGING will be filed. ASSIGNEE'S legal LLC, One Microsof LEGAL REPRESENT on the following O APPLICATION'S Ap was filed on March 16/366,990 by the oft Technology Lic if and its successor the entire and exceeding	Cheng Paul Yuan ("ASSIGNOR") am the origin subject matter ("INVENTION") disclosed ntitled "DEBUGGING TOOL FOR RECOMMEND will be filed. ASSIGNOR hereby auth ASSIGNEE'S legal representative, Microsoft LLC, One Microsoft Way, Redmond, Washing LEGAL REPRESENTATIVES), to insert here on and given Application the following Office APPLICATION's Application No., filing date, a was filed on March 27, 2019 and was given 16/366,990 by the following Office "US Pate oft Technology Licensing, LLC, a Washingtor and its successors and assigns ("ASSIGNEE") the entire and exclusive rights, title and ir e INVENTION and the APPLICATION (and all offrom, such as continuing applications, in who, its territories, and all foreign countries ("AP IOR hereby authorizes, and requests, ASSIGN Application No., filing date, and Office into DERIVATIVES after they are known;

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).

No. of the last of	Max 29 /19	
Inventor's Signature	Date	
Chih Cheng Paul Yuan		
Printed Name in English	Printed Name in Native Language	
	(if other than English)	

of subject ma	itter ("INVENTION")	••	or or an original joint inventor n a patent application entitled ich:	
	ASSIGNEE'S legal in LLC, One Microsoft LEGAL REPRESENT onthe following O	ASSIGNOR hereby authorepresentative, Microsoft of the Way, Redmond, Washington (ATIVES), to insert here and given Application of the fire the thick of the thick	Technology Licensing, on 98052 (ASSIGNEE'S in parentheses (filed Noby) this	
	Was filed on March 27, 2019 and was given Application No 16/366,990 by the following Office "US Patent Office";			
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		iling date, and Office into	EE'S LEGAL REPRESENTATIVES the following table for any	
Application	No.	Filling Date	Office	

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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).

भाventor's Signature

Lachlan Green

Printed Name in English

Date

Lachlan Green

Printed Name in Native Language

(if other than English)