504677709 12/08/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4724431

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
EMMANOUIL KOUKOUMIDIS	07/19/2017
JOSEPH EDWIN JOHNSON JR.	07/18/2017
DUSTIN ISAAC ABRAMSON	07/19/2017
STEVEN GARY ZITTROWER	07/17/2017
DILI	11/15/2017
YING WANG	11/16/2017

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:	15622590

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: usdocket@microsoft.com

Correspondent Name: SCHWEGMAN LUNDBERG & WOESSNER, P.A.

Address Line 1: P.O. BOX 2938

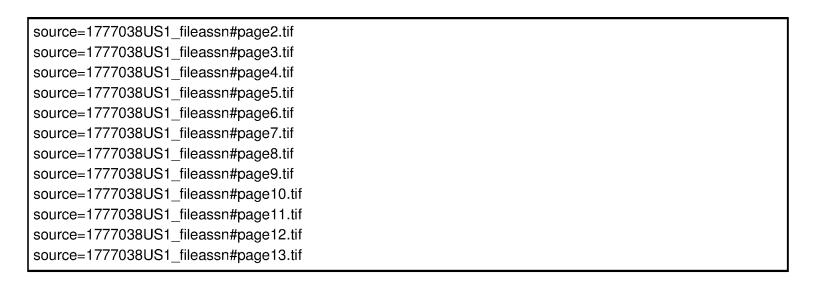
Address Line 4: MINNEAPOLIS, MINNESOTA 55402

ATTORNEY DOCKET NUMBER: 401423-US-NP (1777.038US1	
NAME OF SUBMITTER:	EMILY BATES
SIGNATURE:	/Emily Bates/
DATE SIGNED:	12/08/2017

Total Attachments: 13

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PATENT REEL: 044335 FRAME: 0942



PATENT REEL: 044335 FRAME: 0943

RECORDATION FORM COVER SHEET PATENTS ONLY

Atty Ref/Docket No.: 401423-US-NP (1777.038US1) Patent and Trademark Office 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 Emmanouil Koukoumidis, Joseph Edwin Johnson Jr., Street Address: One Microsoft Way Dustin Isaac Abramson, Steven Gary Zittrower, Di Li, Ying Wang City: Redmond State: WA Zip Country: United States of America Zip: 98052 Additional name(s) of conveying party(ies) attached? Additional name(s) & address(es) attached? []Yes []Yes [X]No XNo 3. Nature of conveyance: [X] Assignment Merger | [] Security Agreement[] Change of Name [] Other Execution Date: July 19, 2017, July 18, 2017, July 19, 2017, July 17, 2017, November 15, 2017, November 16, 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. 15/622,590 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: Andrew R. Peret [[Enclosed [Authorized to be charged to deposit account Address: 19-0743 Schwegman Lundberg & Woessner, P.A. P.O. Box 2938 8. Please charge any additional fees or credit any over Minneapolis, Minnesota 55402--0938 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. 1 andrew Peret 1 Andrew R. Peret/Reg. No. 41,246 Name of Person Signing Total number of pages including cover sheet: 13

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

l Emn	nanouil Koukoumidi	s ("ASSIGNOR") am the or	iginal inventor or an original
•	•	r ("INVENTION") disclosed TIONALLY-RELEVANT CON	and/or claimed in a patent TENT REQUESTS", which:
	ASSIGNEE'S legal is LLC, One Microsoft LEGAL REPRESENT on the following Of	ASSIGNOR hereby authorepresentative, Microsoft of Way, Redmond, Washingto (ATIVES), to insert here and given Application of the fice formulation of the polication of the poli	Technology Licensing, on 98052 (ASSIGNEE'S in parentheses (filed Noby) this
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behalf of itse of acquiring priority, in the derived ther United States ASSIG	elf and its successors, the entire and exc he INVENTION and the efform, such as contons, its territories, and	s and assigns ("ASSIGNEE"), clusive rights, title and in he APPLICATION (and all o tinuing applications, in wh I all foreign countries ("APF zes, and requests, ASSIGN	limited liability company, on, is entitled to, and is desirous terest, including the right of ther applications and patents tole or in part, in and for the PLICATION DERIVATIVES")); EE'S LEGAL REPRESENTATIVES the following table for any
	N DERIVATIVES after		,
Application	No.	Filing Date	Office

MS Docket No.: 401423-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"));

	07/19/2017
Inventor's Signature	Date
Emmanouil Koukoumidis	Εμμανουήλ Κουκουμίδης
Printed Name in English	Printed Name in Native Language
	(if other than English)

joint invento	or of subject matte		riginal inventor or an original and/or claimed in a patent TENT REQUESTS", which:
	ASSIGNEE'S legal is LLC, One Microsoft LEGAL REPRESENT on the following O	ASSIGNOR hereby authorepresentative, Microsoft tway, Redmond, Washing ATIVES), to insert here and given Application ffice	Technology Licensing, ton 98052 (ASSIGNEE'S in parentheses (filed Noby) this
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	Application No., fi I DERIVATIVES after		the following table for any
Application	No.	Filing Date	Office

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"));

	07//8//7
Inventor's Signature	Date
Joseph Edwin Johnson Jr.	
Printed Name in English	Printed Name in Native Language
	(if other than English)

Application No.

Filing Date

Office

MS Docket No.: 401423-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"));

Dustin Uramson/ Inventor's Signature	7/19/2017 Date
Dustin Isaac Abramson	
Printed Name in English	Printed Name in Native Language
	(if other than English)

inventor of s	subject matter ("li		I inventor or an original joint nd/or claimed in a patent TENT REQUESTS", which:
) 1 3	ASSIGNEE'S legal round in the LLC, One Microsoft LEGAL REPRESENT/ on of the following Of	ASSIGNOR hereby author epresentative, Microsoft Way, Redmond, Washings ATIVES), to insert hereand given Application ficeilication No., filing date, as	Technology Licensing, ton 98052 (ASSIGNEE'S in parentheses (filed Noby
		4, 2017 and was given Aptollowing Office "US Pate	•
behalf of itself of acquiring, priority, in the derived there United States, ASSIGN to insert the	f and its successors the entire and exce invention and the from, such as cont its territories, and IOR hereby authoric	and assigns ("ASSIGNEE") clusive rights, title and in the APPLICATION (and all clinuing applications, in whall foreign countries ("AP zes, and requests, ASSIGN	I limited liability company, on , is entitled to, and is desirous terest, including the right of other applications and patents nole or in part, in and for the PLICATION DERIVATIVES")); IEE'S LEGAL REPRESENTATIVES the following table for any
Application I		Filing Date	Office

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"));

	> 7/17/17
Inventor's Signature	Date
Steven Gary Zittrower	
Printed Name in English	Printed Name in Native Language
	(if other than English)

	I Di Li ("ASSIGNO	R") am the (original ii	nventor or	an	ori	ginal joi	nt inventor o	f subject
matter	("INVENTION")	disclosed	and/or	claimed	in	a	patent	application	entitled
"CONV	ERSATIONALLY-	RELEVANT (CONTENT	reques	<u>ΓS</u> ",	wł	nich:		

	vill be filed. ASSIGNOR hereby authorizes, and requests
	ASSIGNEE'S legal representative, Microsoft Technology Licensing,
	LC, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S
	EGAL REPRESENTATIVES), to insert here in parentheses (filed
	onand given Application Noby
	he following Office
	APPLICATION's Application No., filing date, and Office, when known
\boxtimes	vas filed on <u>June 14, 2017</u> and was given Application No
	5/622,590 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 Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office

MS Docket No.: 401423-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"));

D: /:	2017.11.15
Inventor's Signature	Date
Di Li	基础
Printed Name in English	Printed Name in Native Language (if other than English)

subject mati	er ("INVENTION") di	-	or an original joint inventor of a patent application entitled nich:
	will be filed. ASSIGNEE'S legal LLC, One Microsof LEGAL REPRESENT on the following O	ASSIGNOR hereby authorepresentative, Microsoft tway, Redmond, Washington (ATIVES), to insert here and given Application ffice plication filing date, and given in the control of the contr	rizes, and requests, Technology Licensing, on 98052 (ASSIGNEE'S in parentheses (filed Noby
		14, 2017 and was given Ap a following Office " <u>US Pater</u>	
behalf of itse of acquiring priority, in to derived then United State ASSIC to insert the	elf and its successor, the entire and ex he INVENTION and t efrom, such as con s, its territories, and	s and assigns ("ASSIGNEE"), clusive rights, title and in the APPLICATION (and all otinuing applications, in what all foreign countries ("API izes, and requests, ASSIGN filing date, and Office into	limited liability company, on is entitled to, and is desirous terest, including the right of ther applications and patents tole or in part, in and for the PLICATION DERIVATIVES")); EE'S LEGAL REPRESENTATIVES the following table for any
Application	No.	Filing Date	Office

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"));

	11/16/20/7
Inventor's Signនុរួជ/ខ	Date
Ying Wang	
Printed Name in English	Printed Name in Native Language
	(if other than English)