PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CAGRI OZCAGLAR	06/13/2019
GIO CARLO C. BORJE	06/18/2019
SAHIN C. GEYIK	06/13/2019
GURWINDER S. GULATI	06/13/2019
KETAN THAKKAR	06/14/2019

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:	16446364

CORRESPONDENCE DATA

Fax Number: (530)759-1665

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.

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Email: jeannie@parklegal.com **Correspondent Name:** DANIEL E. VAUGHAN

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Address Line 2: 2820 FIFTH STREET

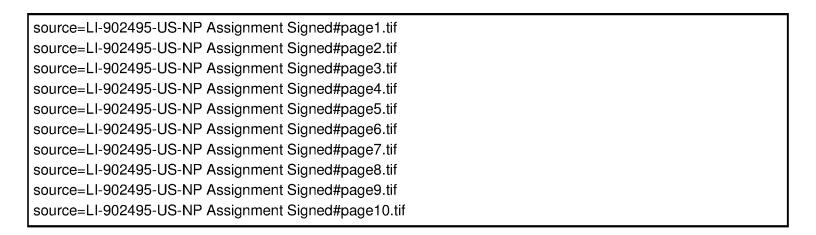
Address Line 4: DAVIS, CALIFORNIA 95618

ATTORNEY DOCKET NUMBER:	LI-902495-US-NP
NAME OF SUBMITTER:	DANIEL E. VAUGHAN
SIGNATURE:	/Daniel E. Vaughan/
DATE SIGNED:	07/02/2019
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Total Attachments: 10

PATENT REEL: 049652 FRAME: 0173

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PATENT REEL: 049652 FRAME: 0174 PATENT ASSIGNMENT MS Docket No.: <u>LI-902495-US-NP</u>

joint invento application	r of subject matte	er ("INVENTION") disclose XTUAL SEARCH RANK	original inventor or an original d and/or claimed in a patent ING USING ENTITY TOPIC
	ASSIGNEE'S legal r LLC, One Microsof LEGAL REPRESENT on by the following C	GNOR hereby authorizes, a representative, Microsoft To the Way, Redmond, Washing ATIVES), to insert here in part and given Application of the Toplication No., filing date,	echnology Licensing, iton 98052 (ASSIGNEE'S parentheses (filed in No rademark Office" this
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	pplication No., fil I DERIVATIVES after		the following table for any
Application N	lo.	Filing Date	Office

MS Docket No.: <u>LI-902495-US-NP</u>

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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A.	06/13/2019
Inventor's Signature	Date
Cagri Ozcaglar	.:
Printed Name in English	Printed Name in Native Language (if other than English)

joint invento application e	r of subject matter	_("ASSIGNOR") am the orig ("INVENTION") disclosed a <u>IAL SEARCH RANKING USIN</u> ON"), which:	nd/or claimed in a patent
	ASSIGNEE'S legal r LLC, One Microsof LEGAL REPRESENT on by the following C	GNOR hereby authorizes, a representative, Microsoft T ft Way, Redmond, Washing ATIVES), to insert here in p and given Applicatio Office "U.S. Patent and To oplication No., filing date, a	echnology Licensing, ton 98052 (ASSIGNEE'S parentheses (filed n No rademark Office" this
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APPLICATION	I DERIVATIVES after	they are known;	
Application N	lo.	Filing Date	Office
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PATENT ASSIGNMENT MS Docket No.: LI-902495-US-NP

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gob	06/18/2019
Inventor's Signature	Date
Gio Carlo C. Borje Printed Name in English	Printed Name in Native Language (if other than English)

inventor of si	ubject matter ("INV NTEXTUAL SEARC	ENTION") disclosed and/or	I inventor or an original joint claimed in a patent application TY TOPIC REPRESENTATIONS"
	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 onand given Application No by the following Office "U.S. Patent and Trademark Office" this APPLICATION's Application No., filing date, and Office, when known;		
	was filed on <u>19 June 2019</u> and was given Application No. <u>16/446,364</u> by the following Office " <u>U.S. Patent and Trademark Office</u> ";		
behalf of itse acquiring, the in the INVEN therefrom, su its territories	If and its successor e entire and exclus TION and the APPL Ich as continuing a , and all foreign co	s and assigns ("ASSIGNEE") ive rights, title and interest LICATION (and all other ap pplications, in whole or in p untries ("APPLICATION DE	
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Application N		Filing Date	Office

MS Docket No.: LI-902495-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"));

Inventor's Signature	06.13.2019 Date
Sahin C. Geyik	Sahin C. Geyik
Printed Name in English	Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT	SSIGNMENT MS Docket No.: <u>LI-902495-US-NP</u>			
I <u>Gurwinder S. Gulati</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>CONTEXTUAL SEARCH RANKING USING ENTITY TOPIC</u> <u>REPRESENTATIONS</u> " ("APPLICATION"), which:				
will be filed. ASSI	GNOR hereby authorizes, a	nd requests,		
LLC, One Microso LEGAL REPRESENT on	ASSIGNEE'S legal representative, Microsoft Technology Licensing, LLC, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed			
	by the following Office " <u>U.S. Patent and Trademark Office</u> " this APPLICATION's Application No., filing date, and Office, when			
	<u>June 2019</u> and was by the following Office ' _";			
Microsoft Technology Liebehalf of itself and its successor acquiring, the entire and exclus in the INVENTION and the APPL therefrom, such as continuing a its territories, and all foreign co	s and assigns ("ASSIGNEE"), ive rights, title and interest ICATION (and all other ap pplications, in whole or in p	, including the right of priority, plications and patents derived part, in and for the United States,		
ASSIGNOR hereby author insert the Application No., fil APPLICATION DERIVATIVES afte	ing date, and Office into	EE'S LEGAL REPRESENTATIVES to the following table for any		
Application No.	Filing Date	Office		

PATENT ASSIGNMENT MS Docket No.: <u>LI-902495-US-NP</u>

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lolon Cati	06/13/19
Inventor's Signature	Date
Gurwinder S. Gulati	
Printed Name in English	Printed Name in Native Language (if other than English)

inventor of s application e	ubject matter ("INV	NOR") am the original inve ENTION") disclosed and/c <u>AL SEARCH RANKING USI</u> ON"), which:	or claimed in a patent	
	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 onand given Application No by the following Office "U.S. Patent and Trademark Office" this APPLICATION's Application No., filing date, and Office, when known;			
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behalf of itse acquiring, th in the INVEN therefrom, so its territories ASSIG insert the A	If and its successor e entire and exclusion TION and the APPLuch as continuing a and all foreign co	s and assigns ("ASSIGNEE" ive rights, title and interestive rights, title and interestication (and all other applications, in whole or in untries ("APPLICATION DETECTION DETECT	on limited liability company, on), is entitled to, and is desirous of it, including the right of priority, pplications and patents derived part, in and for the United States, ERIVATIVES")); JEE'S LEGAL REPRESENTATIVES to o the following table for any	
Application N		Filing Date	Office	

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MS Docket No.: LI-902495-US-NP

Inventor's Signature	06/14/19
Ketan Thakkar	
Printed Name in English	Printed Name in Native Language (if other than English)