PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5291746

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BLAKE R. HUTCHINSON	05/31/2016
JESSE SHI-YUAN OU	05/31/2016
AMBROSE Y.W. LEUNG	05/31/2016
BRANDON A. CHALK	05/27/2016
ROBERT J. MOONEY III	06/02/2016

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:	16225321

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.

Phone: 425-882-8080

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Correspondent Name: MICROSOFT TECHNOLOGY LICENSING, LLC

Address Line 1: ONE MICROSOFT WAY

Address Line 4: REDMOND, WASHINGTON 98052

ATTORNEY DOCKET NUMBER:	359448-US-CNT (M15.043C)	
NAME OF SUBMITTER:	NANDU A. TALWALKAR	
SIGNATURE:	/NAT/	
DATE SIGNED:	12/19/2018	

Total Attachments: 10

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PATENT REEL: 047817 FRAME: 0317

	PATENT A	SSIGNMENT	MS Docket No.	: <u>359448.01</u>
inventor of	subject matter ("l	NVENTION") disclo	original inventor or ar ised and/or claimed in An Environment" ("A	in a patent
	ASSIGNEE'S legal r LLC., One Microsoft LEGAL REPRESENTA on the following Of	epresentative, Mico t Way, Redmond, W ATIVES), to insert and given Appl fice	authorizes, and re osoft Technology Lic ashington 98052 (ASS here in parenthese ication No date, and Office, when	tensing, IGNEE'S s (filed by this
	was filed on	and was	given Application	
	No			
behalf of itsel of acquiring, priority, in th derived there United States ASSIGN	If and its successors the entire and exce e INVENTION and the from, such as cont , its territories, and	and assigns ("ASSI clusive rights, title ne APPLICATION (ar inuing applications all foreign countri zes, and requests, a	ington limited liability GNEE"), is entitled to, a and interest, including and all other application in whole or in part, es ("APPLICATION DER ASSIGNEE'S LEGAL REP	and is desirousing the right of the right of the in and for the IVATIVES"));
APPLICATION	DERIVATIVES after	they are known;		
Application	No.	Filing Date	Office	
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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).

MS Docket No.: 359448.01

inventor of	subject matter (' entitled " <u>Princi</u>	SSIGNOR") am the orig "INVENTION") disclosed pal Access Determi	d and/or claimed	d in a patent
\boxtimes	ASSIGNEE'S legal	ASSIGNOR hereby au representative, Micros ft Way, Redmond, Wash	oft Technology Li	censing,
		FATIVES), to insert he		
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		office plication No., filing date		
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Inventor's Signature	
Jesse Shi-Yuan Ou	
Printed Name in English	Printed Name in Native Language
	(if other than English)

PATENT ASSIGNMENT MS Docket No.: 359448.01 I Ambrose Y.W. Leung ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "Principal Access Determination in An Environment" ("APPLICATION"), which: 🔯 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 APPLICATION's Application No., filing date, and Office, when known; was filed on _____ and was given Application No by the following 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

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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Inventor's Signature Date

Ambrose Y.W. Leung
Printed Name in English Printed Name in Native Language
(If other than English)

PATENT ASSIGNMENT MS Docket No.: 359448.01

1 <u>Bra</u>	<u>ndon A. Chalk</u> ("/	ASSIGNOR") am the o	riginal inventor c	or an original joint
inventor of	subject matter	("INVENTION") disclo	osed and/or clai	med in a patent
		<u>cipal Access Dete</u>		
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الشكا		ASSIGNOR hereby		
		l representative, Mic	~	
	LLC., One Micros	oft Way, Redmond, W	ashington 98052	(ASSIGNEE'S
	LEGAL REPRESE	NTATIVES), to insert	here in parent	heses (filed
	on	and given Appl	ication No	by
	the following	Office	~~~~~) this
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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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Inventor's Signature Date

Brandon A. Chalk

Printed Name in English Printed Name in Native Language

(if other than English)

I Robert J. Mooney, III (",	ASSIGNOR") am the origina	l inventor or an original joint
inventor of subject matter ("	_	
		on In An Environment."
("APPLICATION"), which:		
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	ASSIGNOR hereby autho	
-	representative, Microsoft t Way, Redmond, Washingt	
LEGAL REPRESENT.	ATIVES), to insert here	in parentheses (filed
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Microsoft Technology Lice behalf of itself and its successors of acquiring, the entire and exc	s and assigns ("ASSIGNEE"),	
priority, in the INVENTION and t	_	
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officed states, its territories, and	all foreign countries (Ari	FLICATION DERIVATIVES)),
ASSIGNOR hereby authori	zes, and requests, ASSIGN	EE'S LEGAL REPRESENTATIVES
to insert the Application No., f	•	
APPLICATION DERIVATIVES after		ine reneming table is. mil,
Application No.	Filing Date	Office

MS Docket No.: <u>359448.01</u>

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Wentor' Signature	2016-06-02 Date
Robert J. Mooney, III	
Printed Name in English	Printed Name in Native Language
	(if other than English)

RECORDED: 12/19/2018