504720508 01/09/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4767231

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ANDREW HAON	04/20/2017
NATHANIEL TERRELL CLINTON	04/17/2017
DMITRIY MEYERZON	05/18/2017
ADRI VERLAAN	04/21/2017
NIKITA VORONKOV	04/12/2017
JEFFREY L. WIGHT	04/21/2017
KRISTEN KAMATH	05/30/2017
ZHIHUA DONG	01/04/2018
DAVID M COHEN	04/17/2017
RYAN NAKHOUL	08/03/2017

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:	15486007

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 55402-0938

ATTORNEY DOCKET NUMBER: 401650-US-NP 1777.054US1

NAME OF SUBMITTER: ROWENA J ARTHURS

PATENT 504720508 REEL: 045029 FRAME: 0001

SIGNATURE: /Rowena J Arthurs/ **DATE SIGNED:** 01/09/2018 **Total Attachments: 21** source=1777054us1Recordationcs1781353#page1.tif source=1777054us1Recordationcs1781353#page2.tif source=1777054us1Recordationcs1781353#page3.tif source=1777054us1Recordationcs1781353#page4.tif source=1777054us1Recordationcs1781353#page5.tif source=1777054us1Recordationcs1781353#page6.tif source=1777054us1Recordationcs1781353#page7.tif source=1777054us1Recordationcs1781353#page8.tif source=1777054us1Recordationcs1781353#page9.tif source=1777054us1Recordationcs1781353#page10.tif source=1777054us1Recordationcs1781353#page11.tif source=1777054us1Recordationcs1781353#page12.tif source=1777054us1Recordationcs1781353#page13.tif source=1777054us1Recordationcs1781353#page14.tif source=1777054us1Recordationcs1781353#page15.tif source=1777054us1Recordationcs1781353#page16.tif source=1777054us1Recordationcs1781353#page17.tif source=1777054us1Recordationcs1781353#page18.tif source=1777054us1Recordationcs1781353#page19.tif source=1777054us1Recordationcs1781353#page20.tif

source=1777054us1Recordationcs1781353#page21.tif

PATENT REEL: 045029 FRAME: 0002

RECORDATION FORM COVER SHEET PATENTS ONLY

Atty Ref/Docket No.: 401650-US-NP (1777.054US1)	Patent and Trademark Office		
To the Director of the U.S. Patent and Trademark Offic I. Name of conveying party(ies):	e: Please record the attached original documents or copy thereof. 2. Name and address of receiving party(ies):		
Andrew Haon, Nathaniel Terrell Clinton, Dmitriy	Name: Microsoft Technology Licensing, LLC		
Meyerzon, Adri Verlaan, Nikita Voronkov, Jeffrey L. Wight, Kristen Kamath, Zhihua Dong, David M Cohen Ryan Nakhoul			
Additional name(s) of conveying party(ies) attached?	City: <u>Redmond</u> State: <u>WA</u> Zip: <u>98052</u> Country: <u>United States of America</u>		
[]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: April 20, 2017, April 17, 2017, May 18, 2017, April 21, 2017, April 12, 2017, April 21, 2017, May 30, 2017, January 4, 2018, April 17, 2017, August 3, 2017			
4. Application number(s) or patent number(s):			
If this document is being filed together with a new appl	ication, the execution date of the application is:		
A. Patent Application No.(s)	B. Patent No.(s)		
Serial No. 15/486,007 Filed A	April 12, 2017		
Additional numbers attached? []Yes [X]No			
5. Name and address of party to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41):\$ 0.00		
Name: Alex D. Starkovich Address: Schwegman Lundberg & Woessner, P.A. P.O. Box 2938 Minneapolis, Minnesota 554020938	[]Enclosed []Authorized to be charged to deposit account 19-0743 8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743		
DO NOT	USE THIS SPACE		
9. Statement and signature. To the best of my knowledge and belief, the foregoing is of the original document.	information is true and correct and any attached copy is a true copy		
Alex D. Starkovich/Reg. No. 56,925	/Alex Starkovich/ January 8, 2018		
Name of Person Signing	Signature Date		
	Total number of pages including cover sheet: 21		

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: 045029 FRAME: 0003

of subject m	atter ("INVENTION")		or or an original joint inventor in a patent application entitled OTIFICATIONS", which:
	ASSIGNEE'S legal to LLC, One Microsof LEGAL REPRESENT on the following O	ASSIGNOR hereby authorepresentative, Microsoft tway, Redmond, Washing (ATIVES), to insert here and given Application fficeplication No., filing date, a	Technology Licensing, ton 98052 (ASSIGNEE'S in parentheses (filed Noby) this
		12, 2017 and was given A e following Office " <u>US Pate</u>	
behalf of itse of acquiring priority, in the derived ther	elf and its successor	s and assigns ("ASSIGNEE") clusive rights, title and in he APPLICATION (and all c tinuing applications, in wi	I limited liability company, on 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"));
to insert the	· · · · · · · · · · · · · · · · · · ·	iling date, and Office int	IEE'S LEGAL REPRESENTATIVES o the following table for any
Application	No.	Filing Date	Office

aml C Him	4/20/17
Inventor's Signature	Date
Andrew Haon	
Printed Name in English	Printed Name in Native Language
	(if other than English)

PATENT ASSIGNMENT

I Nathaniel 3 joint inventor of si application entitle	ubject matter ("INVENTION")	am the original inventor or an origina disclosed and/or claimed in a paten PROGRAMMABLE INTRANET PUSH
NOTIFICATIONS", w		
ASSIG LLC, C LEGAL	NEE'S legal representative, M Ine Microsoft Way, Redmond, . REPRESENTATIVES), to inse	by authorizes, and requests, Microsoft Technology Licensing, Washington 98052 (ASSIGNEE'S ert here in parentheses (filed oplication No
APPLIC		ng date, and Office, when known;
Microsoft Tea behalf of itself and i of acquiring, the ea priority, in the INVE derived therefrom,	ts successors and assigns ("AS ntire and exclusive rights, titl NTION and the APPLICATION (such as continuing applicatio	
to insert the Applic		s, ASSIGNEE'S LEGAL REPRESENTATIVES Office into the following table for any
Application No.	Filing Date	Office

process	***************************************	
		4/17/2017
	Inventor's Signature	Date
	Nathaniel Terrell Clinton	
	Printed Name in English	Printed Name in Native Language
		(if other than English)

	subject matter ("I entitled " <u>ORGAN</u>		inventor or an original joint nd/or claimed in a patent <u>MABLE INTRANET PUSH</u>
	ASSIGNEE'S legal r LLC, One Microsoft LEGAL REPRESENT on the following O	ASSIGNOR hereby author epresentative, Microsoft Way, Redmond, Washingt ATIVES), to insert here and given Application ffice	Technology Licensing, on 98052 (ASSIGNEE'S in parentheses (filed Noby) this
Ø	mitimi	2, 2017 and was given Ap following Office " <u>US Pater</u>	
behalf of itse of acquiring priority, in the derived then	elf and its successors the entire and exc ne INVENTION and the efrom, such as cont	and assigns ("ASSIGNEE"), clusive rights, title and in he APPLICATION (and all o linuing applications, in wh	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"));
to insert the	· ·	iling date, and Office into	EE'S LEGAL REPRESENTATIVES the following table for any
Application	No.	Filing Date	Office
	, , , , , , , , , , , , , , , , , , ,		

/	
On the heyeser	5//8//7
Inventor's Signature	Date
Dmitriy Meyerzon	
Printed Name in English	Printed Name In Native Language
	(if other than English)

of subject m	atter ("INVENTION") (· · ·	r or an original joint inventor a patent application entitled TIFICATIONS, which:
	ASSIGNEE'S legal in LLC, One Microsoft LEGAL REPRESENT	ASSIGNOR hereby authorepresentative, Microsoft two washingt two, Redmond, Washingt artification and given Application	Technology Licensing, on 98052 (ASSIGNEE'S in parentheses (filed
	the following O	ffice	this
	APPLICATION'S App	plication No., filing date, an	id Office, when known;
		<u>I 2, 2017</u> and was given Ap e following Office " <u>US Pater</u>	
behalf of itse of acquiring priority, in the derived ther	elf and its successor: , the entire and ex- he INVENTION and t efrom, such as con-	s and assigns ("ASSIGNEE"), clusive rights, title and in he APPLICATION (and all o tinuing applications, in wh	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"));
to insert the	•	iling date, and Office into	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"));

Mi Wees	4/21/2017
Thventor's Signature	Date '
Adri Verlaan	
Printed Name in English	Printed Name in Native Language
	(if other than English)

PATENT ASSIGNMENT

MS Docket No.: 401650-US-NP

I Nikita Voronkov ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "ORGANIZATIONALLY PROGRAMMABLE INTRANET PUSH NOTIFICATIONS", 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				
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) this APPLICATION's Application No., filing date, and Office, when known; was filed on April 12, 2017 and was given Application No	inventor of application	subject matter (" entitled " <u>ORGAI</u>	INVENTION") disclosed a	and/or claimed in a patent
Was filed on April 12, 2017 and was given Application No 15/486,007 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:		ASSIGNEE'S legal in LLC, One Microsoft LEGAL REPRESENT on the following O	representative, Microsoft t Way, Redmond, Washing 'ATIVES), to insert here and given Application ffice	Technology Licensing, iton 98052 (ASSIGNEE'S in parentheses (filed in Nobyby
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:	8	was filed on April	12, <u>2017</u> and was given A	pplication No
to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known:	behalf of itse of acquiring priority, in the derived there United States	If and its successors the entire and exi e INVENTION and t efrom, such as cont i, its territories, and	s and assigns ("ASSIGNEE") clusive rights, title and ir he APPLICATION (and all d tinuing applications, in wi I all foreign countries ("AP), is entitled to, and is desirous nterest, including the right of other applications and patents hole or in part, in and for the PLICATION DERIVATIVES"));
Application No. Filing Date Office	to insert the	Application No., f	iling date, and Office int	
	Application	No.	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"));

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).

Inventor's Signature

Date

Nikita Voronkov

HUKUTA BOPOHKOB

Printed Name in English

Printed Name in Native Language (if other than English)

l Jeffre	y L. Wight ("ASSIG	NOR") am the orig	inal inventor or a	n original joint inventor
of subject ma	itter ("INVENTION"	') disclosed and/o	r claimed in a pat	ent application entitled
"ORGANIZAT	<u>IONALLY PROGRA</u>	MMABLE INTRANE	<u>T PUSH NOTIFICA</u>	TIONS", which:
	will be filed.	ASSIGNOR her	eby authorizes,	and requests,
		representative,		
	and the second s	oft Way, Redmond		G- 1
		iTATIVES), to in	·	
		and given A	•	
	the following			
		pplication No., fil		
		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
\boxtimes	was filed on <u>Apri</u>	<u>l 12, 2017</u> and w	as given Applicati	on No
	15/486,007 by t	he following Offic	e "US Patent Offic	:e ":
			100 <u></u>	
Micros	oft Technology L	icensing, LLC, a V	/ashington limite	d liability company, on
				tled to, and is desirous
of acquiring,	the entire and e	xclusive rights, t	itle and interest,	including the right of
				oplications and patents
derived there	efrom, such as co	ntinuing applicat	ions, in whole or	in part, in and for the
	The state of the s			ION DERIVATIVES"));
ASSIG	NOR hereby autho	irizes, and reques	ts, ASSIGNEE'S LE	GAL REPRESENTATIVES
to insert the	Application No.,	filing date, and	Office into the f	ollowing table for any
APPLICATION	I DERIVATIVES aft	er they are knowr	r.	
Annlication		Filing Date	Office	·······

ly entor Signature	<u>4/21/17</u> Date
Jeffrey L. Wight	
Printed Name in English	Printed Name in Native Language
·	(if other than English)

1 Krist	ten Kamath ("ASSIC	GNOR") am the original i	nventor or an original joint
inventor of	subject matter ("I	INVENTION") disclosed a	nd/or claimed in a patent
application	entitled "ORGAN	NIZATIONALLY PROGRAM	MMABLE INTRANET PUSH
NOTIFICATIO	<u>'NS</u> ", which:		
	will be filed.	ASSIGNOR hereby autho	orizes, and requests,
		representative, Microsoft	-
	•	: Way, Redmond, Washingt	ur i
	·	ATIVES), to insert here	
		and given Application	•
		ffice	
		olication No., filing date, ar	
\boxtimes	was filed on April 1	12, 2017 and was given Ap	aplication No
1231			
	13/466,007 by the	following Office " <u>US Pate</u>	<u>nt Office</u> ,
Micros	soft Technology Lice	ensing, LLC, a Washington	limited liability company, on
behalf of itse	If and its successors	s and assigns ("ASSIGNEE")	, is entitled to, and is desirous
of acquiring,	, the entire and exc	clusive rights, title and in	terest, including the right of
priority, in th	ie INVENTION and th	he APPLICATION (and all o	ther applications and patents
derived there	efrom, such as cont	inuing applications, in wh	ole or in part, in and for the
United States	, its territories, and	all foreign countries ("API	PLICATION DERIVATIVES"));
ASSIGI	NOR hereby authori	zes, and requests, ASSIGN	EE'S LEGAL REPRESENTATIVES
	•	•	o the following table for any
	I DERIVATIVES after		
Application	 No.	Filing Date	Office
. 10 10 11 0001 011		A TOTAL TOTA	

			<u> </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"));

Kusten Womalls	5/30/17
Inventor's Signature	Date
Kristen Kamath	
Printed Name in English	Printed Name in Native Language
	(if other than English)

of subject mat "ORGANIZATION Which is a second of acquiring, to the priority, in the derived theref	ter ("INVENTION") of the control of	disclosed and/or claimed in MABLE INTRANET PUSH NO ASSIGNOR—hereby—author representative, Microsoft—at Way, Redmond, Washington ATIVES), to insert here—and given Application office—and given Application of the following Office "US Pater ensing, LLC, a Washington and assigns ("ASSIGNEE"), clusive rights, title and in the APPLICATION (and all octinuing applications, in whether the properties of the properti	Technology Licensing, on 98052 (ASSIGNEE'S in parentheses (filed Noby) this ad Office, when known;
to insert the	•	iling date, and Office into	EE'S LEGAL REPRESENTATIVES the following table for any
Application N	ło.	Filing Date	Office
§		8	

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"));

2-1	01/04/2018
Inventor's Signature (Date
Zhihua Dong	一菱岩牛
Printed Name in English	Printed Name in Native Language (if other than English)

I David M Cohen ("ASSIGNOR") am the original inventor or an original joint inventor
of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled
"ORGANIZATIONALLY PROGRAMMABLE INTRANET PUSH NOTIFICATIONS", which:
\square 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 <u>April 12, 2017</u> and was given Application No
15/486,007 by the following Office " <u>US Patent Office</u> ";
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

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;

United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

Application No.	Filing Date	Office

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).

David M Cohen	4/17/2017
Inventor's Signature	Date
David M Cohen	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I Ryan Nakhoul ("ASSIGNO of subject matter ("INVENTION") "ORGANIZATIONALLY PROGRAM	disclosed and/or claimed i	or or an original joint inventor in a patent application entitled OTIFICATIONS", which:
ASSIGNEE'S legal LLC, One Microsof 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
	<u>L2, 2017</u> and was given A _l : following Office " <u>US Pate</u> :	
Microsoft Technology Lice behalf of itself and its successors of acquiring, the entire and ex- priority, in the INVENTION and to derived therefrom, such as cont United States, its territories, and	s and assigns ("ASSIGNEE"), clusive rights, title and in he APPLICATION (and all o tinuing applications, in wh	terest, including the right of ther applications and patents role or in part, in and for the
ASSIGNOR hereby authorication No., find the Application No., find APPLICATION DERIVATIVES after	iling date, and Office into	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"));

Ryzv. N. Zk. Nov. () Inventor's Signature	08/03/2017 Date
Ryan Nakhoul	
Printed Name in English	Printed Name in Native Language
	(if other than English)