PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5308413

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHARLES JOSEPH RIES	01/03/2019
PATRICK NELSON	01/03/2019
CAGRI ASLAN	01/03/2019
GREGORY MISKELLY	01/03/2019
ISADORA SOPHIA GARCIA RODOPOULOS	01/03/2019

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:	16239474

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: 425-707-9382

Email:usdocket@microsoft.comCorrespondent Name:MICROSOFT CORPORATION

Address Line 1: ONE MICROSOFT WAY

Address Line 4: REDMOND, WASHINGTON 98052

ATTORNEY DOCKET NUMBER:	405681-US-NP
NAME OF SUBMITTER:	JOHN OGILVIE
SIGNATURE:	/John Ogilvie/
DATE SIGNED:	01/03/2019

Total Attachments: 10

source=405681-US-NP_Assignment_CagriASLAN#page1.tif

PATENT REEL: 047896 FRAME: 0409

505261641

```
source=405681-US-NP_Assignment_CagriASLAN#page2.tif
source=405681-US-NP_Assignment_CharlesJosephRIES#page1.tif
source=405681-US-NP_Assignment_GregoryMISKELLY#page1.tif
source=405681-US-NP_Assignment_GregoryMISKELLY#page2.tif
source=405681-US-NP_Assignment_GregoryMISKELLY#page2.tif
source=405681-US-NP_Assignment_IsadoraSophiaGARCIA-RODOPOULOS#page1.tif
source=405681-US-NP_Assignment_IsadoraSophiaGARCIA-RODOPOULOS#page2.tif
source=405681-US-NP_Assignment_PatrickNELSON#page1.tif
source=405681-US-NP_Assignment_PatrickNELSON#page2.tif
```

PATENT REEL: 047896 FRAME: 0410

I, Cag	gri ASLAN ("ASSIG	NOR"), am the original	inventor or an original join
inventor of	subject matter ("INVENTION") disclosed	and/or claimed in a paten
application	entitled "DATA	BREAKPOINTS ON CERT	AIN KINDS OF FUNCTIONS
("APPLICATIO			
,	,,		
\boxtimes	will be filed.	ASSIGNOR hereby auth	norizes, and requests,
	ASSIGNEE'S legal	representative, Microsoft	Technology Licensing,
	LLC., One Mic	rosoft Way, Redmond	, Washington 98052
	-	GAL REPRESENTATIVES),	. <u> </u>
		on	
		b	
		N's Application No., filing	
	known;	it 5 / ippireacion itoi, ining	, date, and office, when
	Kilowii,		
	was filed on	and was given A	pplication No.
		by the following Office "_	
		by the following office _	,
desirous of a right of prior patents deriv for the Un DERIVATIVES	acquiring, the enting ity, in the INVENTI ved therefrom, such its to the states, its to the states its	re and exclusive rights, t ON and the APPLICATION h as continuing application erritories, and all fore	GNEE"), is entitled to, and interest, including the land all other applications and ons, in whole or in part, in and ign countries ("APPLICATION")
ASSIG	NOR hereby	authorizes, and req	uests, ASSIGNEE'S LEGA
REPRESENTA	TIVES to insert tl	ne Application No., filin	g date, and Office into the
following tab	ole for any APPLICA	TION DERIVATIVES after t	hey are known;
Application N	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"));

de	1/3/2019
Inventor's Signature	Date
Cagri ASLAN	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, Ch	arles Jose	oh RIES ("ASSIGNOR"), ai	n the origi	nal inve	entor or	an o	rigin	al joint
inventor of	subject	matter	("INVENTION")	disclosed	and/o	r claim	ed ii	n a	patent
application	entitled	"DATA	BREAKPOINTS	ON CER	TAIN K	INDS (OF F	UNC	TIONS"
("APPLICATI	ON"), which	:h:							

\boxtimes	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
) this 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"));

Charles Dough Ris	1/3/2019
Inventor's Signature	Date
Charles Joseph RIES	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, Gre	gory MISKELLY ("/	ASSIGNOR"), am the	e original inventor or a	n original join
	entitled "DATA		closed and/or claimed N CERTAIN KINDS OI	
	ASSIGNEE'S lega LLC., One Mi (ASSIGNEE'S LE parentheses (file No.	I representative, M crosoft Way, Re GAL REPRESENTA d on	by authorizes, and r licrosoft Technology Li edmond, Washington (TIVES), to insert b and given App by the following o., filling date, and Office	censing, 98052 nere in plication g Office
		and was by the following C	given Application No.	
behalf of it desirous of right of prio patents deri	self and its succ acquiring, the ent rity, in the INVENT ved therefrom, su ited States, its	essors and assign ire and exclusive i TON and the APPLIC ch as continuing a	ashington limited liabilit s ("ASSIGNEE"), is entit rights, title and interest CATION (and all other a pplications, in whole or all foreign countries	led to, and is , including the pplications and in part, in and
REPRESENTA	TIVES to insert		d requests, ASSIGI o., filing date, and C Safter they are known;	
Application		Filing Date	Office	

		<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"));

2000 Muss	1/3/2019
Inventor's Signature	Date
Gregory MISKELLY	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, Isadora Sophia GARCIA RODOPOULOS ("ASSIGNOR"), am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "DATA BREAKPOINTS ON CERTAIN KINDS OF FUNCTIONS" ("APPLICATION"), which:

\boxtimes	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
) this 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"));

Indea Isakia, lama Ragader Inventor's Signature	1/3/a019 Date
Isadora Sophia GARCIA RODOPOULOS	
Printed Name in English	Printed Name in Native Language (if other than English)

inventor of subject matter application entitled "DATA ("APPLICATION"), which:	("INVENTION") discl	osed and/or claimed	in a paten
ASSIGNEE'S legal LLC., One Mic (ASSIGNEE'S LE parentheses (filed No	representative, Mic crosoft Way, Red GAL REPRESENTAT d on	authorizes, and requiresoft Technology Lice Imond, Washington S IVES), to insert her and given Appli by the following , filing date, and Office,	nsing, 98052 e in cation Office
	and was g by the following Of	iven Application No.	
behalf of itself and its succe desirous of acquiring, the ent right of priority, in the INVENT patents derived therefrom, suc for the United States, its DERIVATIVES"));	essors and assigns ire and exclusive rig ION and the APPLICA ch as continuing app	ghts, title and interest, i ATION (and all other app plications, in whole or in	d to, and is neluding the lications and part, in and
ASSIGNOR hereby REPRESENTATIVES to insert to following table for any APPLICATION	the Application No	, ,	
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"));

B~ 1/-	1/3/2019	
Inventor's Signature	Date	
Patrick NELSON		
Printed Name in English	Printed Name in Native Language	
	(if other than English)	