PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5815397

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ANTONY IAN TAYLOR ROWSTRON	05/17/2018
IOAN ALEXANDRU STEFANOVICI	06/01/2018
AARON WILLIAM OGUS	06/04/2018
DOUGLAS WAYNE PHILLIPS	05/17/2018
RICHARD JOHN BLACK	05/29/2018
AUSTIN NICHOLAS DONNELLY	05/17/2018
ALEXANDER LLOYD GAUNT	05/17/2018
ANDREAS GEORGIOU	10/11/2018
ARIEL GOMEZ DIAZ	05/30/2018
SERGUEI ANATOLIEVITCH LEGTCHENKO	05/17/2018
REINHARD SEBASTIAN BERNHARD NOWOZIN	05/18/2018
BENN CHARLES THOMSEN	06/04/2018
HUGH DAVID PAUL WILLIAMS	06/01/2018
DAVID LARA SAUCEDO	06/01/2018
PATRICK NEIL ANDERSON	06/01/2018
ANDROMACHI CHATZIELEFTHERIOU	06/01/2018
JOHN CHRISTOPHER DAINTY	05/17/2018
JAMES HILTON CLEGG	05/30/2018
RALUCA ANDREEA DIACONU	05/29/2018
ROKAS DREVINSKAS	05/29/2018
MENGYANG YANG	06/01/2018

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

PATENT REEL: 050990 FRAME: 0137

505768581

Property Type	Number
Application Number:	16680865

CORRESPONDENCE DATA

Fax Number: (425)936-7329

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: 425-538-9035

Email: usdocket@microsoft.com

Correspondent Name: MICROSOFT CORPORATION

Address Line 1: ONE MICROSOFT WAY

Address Line 4: REDMOND, WASHINGTON 98052

ATTORNEY DOCKET NUMBER:	404464-US-CNT
NAME OF SUBMITTER:	CATHERINE POLANCE
SIGNATURE:	/Catherine Polance/
DATE SIGNED:	11/12/2019

Total Attachments: 42

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PATENT REEL: 050990 FRAME: 0139

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original joint i	y lan Taylor ROWSTRON ("AS: nventor of subject matter ("IN tion entitled " <u>DISAGGREGATED</u> "), which:	IVENTION") disclosed and/or	claimed in a
A Li	vill be filed. ASSIGNOR h SSIGNEE'S legal representative LC, One Microsoft Way, Redmo EGAL REPRESENTATIVES), to ins and given A	e, Microsoft Technology Lice and, Washington 98052 (ASSI	ensing, GNEE'S I on
	he following Office PPLICATION's Application No.,		_) this known;
	was filed on May 16, 2018 and $\frac{5}{981,789}$ by the following Of		

MS Docket No · 404464-LIS-NP

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"));

Application No.	Filing Date	Office
16/680,865	November 12, 2019	USPTO

MS Docket No.: 404464-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"));

Antony Rowsher	
	17 th May 2018
Inventor's Signature	Date
Antony lan Taylor ROWSTRON	
Printed Name in English	Printed Name in Native Language
	(if other than English)

DATENT	ASSIGNMENT
8 7 4 8 8 7 1 9 8	A-CONCAST STATE OF THE STATE OF

MS Docket No.: 404464-US-NP

original joint	Alexandru STEFANOVICI ("ASSIGNOR") am the original invitation of subject matter ("INVENTION") disclosed and/or station entitled "DISAGGREGATED DATA STORAGE AND RETRIENTS"), which:	claimed in a
	will be filed. ASSIGNOR hereby authorizes, and req ASSIGNEE'S legal representative, Microsoft Technology Lices LLC, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE), to insert here in parentheses (filed and given Application No.	nsing, iNEE'S on
) this
	was filed on May 16, 2018 and was given Application No 15/981,789 by the following Office "USPTO";	

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"));

ASSIGNEE'S LEGAL ASSIGNOR hereby authorizes. and requests, 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
16/680,865	November 12, 2019	USPTO
ate .		

MS Docket No.: 404464-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"));

SAA	JUN 1/2018
Inventor's Signature	Date
Ioan Alexandru STEFANOVICI	
Printed Name in English	Printed Name in Native Language
	(if other than English)

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1	ATO T	JOORCLIN	O	<u> 10 1</u>	101	 9	11		

MS Docket No · 404464-US-NP

I <u>Aaron William OGUS</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>DISAGGREGATED DATA STORAGE AND RETRIEVAL SYSTEM</u>" ("APPLICATION"), which:

\[\subseteq \text{will be filed.} \text{ ASSIGNOR hereby authorizes, and requests,} \]

ASSIGNEE'S legal representative, Microsoft Technology Licensing,

will	be	filed.	ASSIGNOR	her	eby a	uthoriz	es, a	and red	quests,
ASSI	GNE	E'S lega	al representa	tive,	Micros	oft Ted	chnol	ogy Lice	ensing,
LLC,	One	Micros	oft Way, Red	mond	l, Wash	ington	9805	2 (ASSI	GNEE'S
LEG/	AL RE	PRESE	NTATIVES), to	inser	t here	in pare	nthes	es (filed	d on
			and give	n Apı	plicatio	n No			by
the f	follo	wing O	ffice) this
APPL	-ICA	ΓΙΟΝ's	Application	No.,	filing	date,	and	Office,	when
knov	vn;								

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Am Willing	6-4-2018
Inventor's Signature	Date
Aaron William OGUS	
Printed Name in English	Printed Name in Native Language
	(if other than English)

MS Docket No.: <u>404464-US-NP</u> NOR") am the original inventor or an origina

joint invento application ("APPLICATIO	or of subject matter entitled " <u>DISAGGI</u>)N"), which: will be filed. ASSIGNEE'S legal LLC, One Microso LEGAL REPRESENT the following Offic APPLICATION'S A known;	PS ("ASSIGNOR") am the er ("INVENTION") discloss REGATED DATA STORA ASSIGNOR hereby au representative, Microsoft Way, Redmond, Washing and given Application ce application No., filing	thorizes, and requipments thorizes, and requipments for the second state of the second	in a paten AL SYSTEM uests, nsing, iNEE'S onby _ this
		e following Office " <u>USPT</u>		
behalf of its desirous of a right of prior patents deriv	elf and its succest acquiring, the entiti ity, in the INVENTI red therefrom, suc ited States, its t	ensing, LLC, a Washingt ssors and assigns ("ASS re and exclusive rights, ON and the APPLICATION h as continuing applicat erritories, and all for	SIGNEE"), is entitled title and interest, in I (and all other appl Ions, in whole or in	d to, and is ncluding the lications and part, in and
REPRESENTA'	TIVES to insert ti	authorizes, and re ne Application No., fili TION DERIVATIVES after	ng date, and Offi	
Application !		Filing Date	Office	
16/680,865		November 12, 2019	USPTO	

Page 1 of 2

MS Docket No.: 404464-US-NP

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~///	17 muy 2018
Inventor [®] s Signature	Date
Douglas Wayne PHILLIPS	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I <u>Richard John BLACK</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>DISAGGREGATED DATA STORAGE AND RETRIEVAL SYSTEM</u>" ("APPLICATION"), which:

MS Docket No.: 404464-US-NP

will	be	filed.	ASSIGNOR	her	eby a	uthoriz	es, a	and rec	uests,
ASSIC	SNE	E'S lega	al representa	tive,	Micros	oft Te	chnole	ogy Lice	nsing,
LLC,	One	Micros	oft Way, Red	mono	l, Wash	ington	9809	iz (Assid	GNEE'S
LEGA	LRE	PRESEN	NTATIVES), to	inser	t here	in pare	nthes	es (filed	on
			and give	n Ap	plicatio	n No.			by
the f	ollov	ving O	ffice						_) this
APPL	ICAT	TION's	Application	No.,	filing	date,	and	Office,	when
know	/n;								

was filed on May 16, 2018 and was given Application No 15/981.789 by the following Office "USPTO":

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Application No.	Filing Date	Office
16/680,865	November 12, 201	9 USPTO

MS Docket No.: 404464-US-NP

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Ruhal Black	29 May 2018
Inventor's Signature	Date
Richard John BLACK	
Printed Name in English	Printed Name in Native Language
	(if other than English)

PATE	NT ASSIGNMENT	MS Docket No.: <u>404464-US</u>	S-NP
joint invento	in Nicholas DONNELLY ("ASSIGN or of subject matter ("INVENTIC entitled " <u>DISAGGREGATED DA</u> DN"), which:	N") disclosed and/or claim	ed in a paten
	will be filed. ASSIGNOR in ASSIGNEE'S legal representative LLC, One Microsoft Way, RedmitteGAL REPRESENTATIVES), to in	re, Microsoft Technology Li ond, Washington 98052 (ASS	censing, SIGNEE'S
	and given	Application No	bγ
	the following Office		
	APPLICATION's Application N known;	o., filing date, and Office	e, when
	was filed on <u>May 16, 2018</u> and <u>15/981,789</u> by the following C		
behalf of its desirous of right of prio patents deri	soft Technology Licensing, LLC, self and its successors and as acquiring, the entire and exclusively, in the INVENTION and the Aved therefrom, such as continuinated States, its territories, a	isigns ("ASSIGNEE"), is entitisive rights, title and interest PPLICATION (and all other a Pg applications, in whole or	led to, and is including the pplications and in part, in and
ASSIG	NOR hereby authorizes,	and requests, ASSIG	NEE'S LEGAI
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	ole for any APPLICATION DERIVA	marks sense of all t	
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A 17_	(7 Man 2018
Inventor's Signature	Date
Austin Nicholas DONNELLY	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I <u>Ale</u>	xander Lle	oyd GAUNT ("ASSIG	NOR") a	am the ori	ginal in	ventor or a	n original
joint invent	or of sub	ject matter ("INVEN	NTION")	disclosed	and/or	claimed in	a patent
application	entitled	"DISAGGREGATED	DATA	STORAGE	AND	RETRIEVAL	SYSTEM"
("APPLICATION	ON"), whic	ch:					

MS Docket No.: <u>404464-US-NP</u>

will	be	filed.	ASSIGNOR	here	eby a	uthoriz	es, a	and re	quests,
ASSI	GNE	E'S lega	al representa	tive,	Micros	oft Te	chnolo	ogy Lic	ensing,
LLC,	One	Micros	oft Way, Red	mond	, Wash	ington	9805	2 (ASS	IGNEE'S
LEGA	AL RE	PRESEN	NTATIVES), to	inser	t here	in pare	nthes	es (file	d on
			and give	n App	olicatio	n No.			by
the	follo	wing O	ffice) this
APPI	_ICA	ΓΙΟΝ's	Application	No.,	filing	date,	and	Office	, when
kno۱	wn;								

was filed on May 16, 2018 and was given Application No 15/981,789 by the following Office "USPTO";

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J. God	17th May 2018
Inventor's Signature	Date
Alexander Lloyd GAUNT	
Printed Name in English	Printed Name in Native Language
	(if other than English)

l <u>And</u>	reas GEO	RGIOU ('ASSIGNOR'	') am th	ne origir	ıal invent	or or an	origir	nal joint
inventor of	subject	matter	("INVENTIC	N") di	sclosed	and/or	claimed	in a	patent
application	entitled	"DISAGO	JREGATED_	DATA	STORA	GE AND	RETRIEV	/AL S	YSTEM"
("APPLICATIO	ON"), which	:h:							
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MS Docket No.: 404464-US-NP

Ш	will	be	filed.	ASSIGNOR	her	eby a	uthoriz	es, a	and rec	quests,
	ASSI	GNE	E'S lega	al representa	tive,	Micros	oft Te	chnok	ogy Lice	ensing,
	LLC,	One	Micros	oft Way, Red	mond	l, Wash	ington	9805	2 (ASSI	GNEE'S
	LEG/	AL RE	EPRESEN	NTATIVES), to	inser	t here	in pare	nthes	es (filec	on
				and give	n Ap	plicatio	n No			by
	the f	fallo	wing O	ffice) this
	APPL	.ICA	TION's	Application						
	knov	vn;								

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Application No.	Filing Date	Office
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Page 1 of 2

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A. Ceoglos— Inventor's Signature	11-0ct-2018
Inventor's Signature	Date
Andreas GEORGIOU	ANTPEAT FERPHOY
Printed Name in English	Printed Name in Native Language
	(if other than English)

PΑ	TENT	Α	SSIG	NM	11.01

MS Docket No.: 404464-US-NP

l <u>Ariel</u>	GOMEZ DIAZ ("ASSIGNOR") am the original inventor or an o	riginal joint
inventor of	subject matter ("INVENTION") disclosed and/or claimed i	in a patent
application	entitled "DISAGGREGATED DATA STORAGE AND RETRIEVA	AL SYSTEM"
("APPLICATIC	DN"), which:	
	will be filed. ASSIGNOR hereby authorizes, and requestion of the control of the c	nsing, NEE'S on
	5 8 31) this
	APPLICATION's Application No., filing date, and Office, known;	when
\boxtimes	was filed on May 16, 2018 and was given Application No 15/981.789 by the following Office "USPTO":	

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and	30/05/2018
Inventor's Signature	Date
Ariel GOMEZ DIAZ	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I Serguei Anatolievitch LEGTCHENKO ("ASSIGNOR") am the original inventor or an
original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a
patent application entitled " <u>DISAGGREGATED DATA STORAGE AND RETRIEVAL SYSTEM</u> "
"APPLICATION"), which:

MS Docket No.: <u>404464-US-NP</u>

will	be	filed.	ASSIGNOR	her	eby a	uthoriz	es, a	and	req	uests,
ASSI	GNE	E'S lega	al representa	tive,	Micros	oft Ted	hnol	ogy	Licei	nsing,
LLC,	One	Micros	oft Way, Red	mond	l, Wash	ington	9805	52 (A	SSIG	NEE'S
LEGA	AL RE	PRESEN	NTATIVES), to	inser	t here	in pare	nthes	ses (f	iled	on
			and give	n Apı	olicatio	n No.				by
the f	follo	wing O	ffice) this
APPL	_ICA	ΓΙΟΝ's	Application	No.,	filing	date,	and	Offi	ce,	when
knov	vn;									

was filed on May 16, 2018 and was given Application No 15/981,789 by the following Office "USPTO";

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"));

Application No.	Filing Date	Office
16/680,865	November 12, 2019	USPTO

MS Docket No.: 404464-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"));

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

Serguei Anatolievitch LEGTCHENKO

Printed Name in English

Date

Сергей Анатольевич Легченко

Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT MS Docket No.: 404464-US-NP

I <u>Reinhard Sebastian Bernhard NOWOZIN</u> ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed n a patent application entitled " <u>DISAGGREGATED DATA STORAGE AND RETRIEVAL</u>
SYSTEM" ("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
the following Office this
APPLICATION's Application No., filing date, and Office, when known;
,
was filed on May 16, 2018 and was given Application No $15/981,789$ by the following Office "USPTO";

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Application No.	Filing Date	Office
16/680,865	November 12, 2019	USPTO

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Inventor's Signature	18th May 2018 Date
Reinhard Sebastian Bernhard NOWOZIN	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I <u>Benr</u>	Charles ⁻	THOMSE	N ("ASSIGN	OR") an	n the orig	inal invei	ntor or an	orig	jinal joint
inventor of	subject	matter	("INVENTIC	ON") di	isclosed	and/or	claimed	in a	a patent
application	entitled	"DISAGO	GREGATED	DATA	STORAC	GE AND	RETRIEV	'AL	SYSTEM"
("APPLICATION	ON"), whic	ch:							

MS Docket No.: <u>404464-US-NP</u>

	will	be	filed.	ASSIGNOR	hereby	authorize	es, and	requests,
	ASSI	GNE	E'S legal	representat	ive, Micr	osoft Tec	hnology	Licensing,
	LLC,	One	Microso	ft Way, Redr	nond, Wa	shington	98052 (4	ASSIGNEE'S
	LEG/	AL RE	EPRESENT	TATIVES), to	insert he	re in parei	ntheses (filed on
				and give	ո Applica	tion No		by
	the	follo	wing Off	ice) this
	APPI	_ICA ⁻	ΓΙΟΝ's Α _Ι	oplication No	o., filing o	late, and C	Office, wh	ien known;
∇	was	filad	on May	16 2018 an	d was aiv	an Annlic	ation No	

was filed on May 16, 2018 and was given Application No 15/981,789 by the following Office "USPTO";

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"));

Application No.	Filing Date	Office
16/680,865	November 12, 2019	USPTO

MS Docket No.: <u>404464-US-NP</u>

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Inventor's Signature	4 June 2018 Date
Benn Charles THOMSEN	
Printed Name in English	Printed Name in Native Language
	(if other than English)

PATE	NT ASSIGNMENT	MS Docket No.: <u>404464-US</u>	<u>-NP</u>
l Huah	<u>ı David Paul WILLIAMS</u> ("ASSIGNO	R") am the original inventor	or an original
·	r of subject matter ("INVENTIOI		· - -
	entitled " <u>DISAGGREGATED DA</u> T		
("APPLICATIO		7, 20, 40, 41, 51, 42, 51, 51, 51, 51, 51, 51, 51, 51, 51, 51	
i	will be filed. ASSIGNOR h		
	ASSIGNEE'S legal representative	•	_
	LLC, One Microsoft Way, Redmo		
	LEGAL REPRESENTATIVES), to ins	•	
	and given A		
	the following Office) this
	APPLICATION'S Application No	., filing date, and Office	, when
	known;		
\boxtimes	was filed on May 16, 2018 and v	vas diven Annlication No	
1000	15/981,789 by the following Of	* * *	
	Talantina of the following of	· · · · · · · · · · · · · · · · · · ·	
8dieros	oft Technology Licensing, LLC, a	Washington limited lightlity	/commany on
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	elf and its successors and ass		
	acquiring, the entire and exclusi	-	_
-	ity, in the INVENTION and the AF	·	
·	red therefrom, such as continuin	• •	•
for the Uni	ited States, its territories, an	d all foreign countries (("APPLICATION
DERIVATIVES	"));		
ASSIGI	NOR hereby authorizes,	and requests, ASSIGN	iee's legal
REPRESENTA	TIVES to insert the Application	n No., filing date, and O	ffice into the
	le for any APPLICATION DERIVAT		
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Application No.	Filing Date	Office
16/680,865	November 12, 2019	USPTO
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MS Docket No.: 404464-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"));

	Head Williams	01/06/2018
	Inversor's Signature	Date
	Hugh David Paul WILLIAMS	
	Printed Name in English	Printed Name in Native Language
· · -		(if other than English)

PATENT ASSIGNMEN	T MS Docket	No.: <u>404464-US-NP</u>	
I <u>David LARA SAUCEDO</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>DISAGGREGATED DATA STORAGE AND RETRIEVAL SYSTEM</u> " ("APPLICATION"), which:			
ASSIGNEE'S legal LLC, One Microso	ASSIGNOR hereby authore representative, Microsoft ft Way, Redmond, Washing FATIVES), to insert here in p	Technology Licensing, ton 98052 (ASSIGNEE'S	
	and given Application N		
	ice Application No., filing da		
	16, 2018 and was given Ar ne following Office <u>"USPTO</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 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	
16/680,865	November 12, 2019	USPTO	

MS Docket No.: <u>404464-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"));

	1 / Sme / 2018
Inventor's Signature	Date
David LARA SAUCEDO	
Printed Name in English	Printed Name in Native Language
	(if other than English)

PATENT ASSIGNME	NT MS Docker	t No.: <u>404464-US-NP</u>
joint inventor of subject ma	tter ("INVENTION") disclose	original inventor or an origina ed and/or claimed in a paten GE AND RETRIEVAL SYSTEM
ASSIGNEE'S leg LLC, One Micro LEGAL REPRESEI the following O APPLICATION's	ASSIGNOR hereby autical representative, Microsof soft Way, Redmond, Washin NTATIVES), to insert here in and given Application fficeApplication No., filing of the content of the co	t Technology Licensing, gton 98052 (ASSIGNEE'S parentheses (filed on No by) this
	<u>y 16, 2018</u> and was given A the following Office " <u>USPT</u>	
behalf of itself and its suc desirous of acquiring, the er right of priority, in the INVEN patents derived therefrom, s	cessors and assigns ("ASS ntire and exclusive rights, t ITION and the APPLICATION uch as continuing application	on limited liability company, or IGNEE"), is entitled to, and is it it and interest, including the (and all other applications and ons, in whole or in part, in and light countries ("APPLICATION")
·	• •	ng date, and Office into the
Application No.	Filing Date	Office
16/680,865	November 12, 2019	USPTO

MS Docket No.: 404464-US-NP

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X	Inventor's Signature Patrick Neil ANDERSON	
	Printed Name in English	Printed Name in Native Language
		(if other than English)

DATERIT	ASSIGNMENT
TAX DIN I	28.3538888VIVIESEN I

MS Docket No.: 404464-US-NP

I Andromachi CHATZIELEFTHERIOU ("ASSIGNOR") am the original inventor or a	an
original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in	a
patent application entitled " <u>DISAGGREGATED DATA STORAGE AND RETRIEVAL SYSTE</u>	<u>v</u> i"
("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	
the following Office) this	
APPLICATION's Application No., filing date, and Office, when known;	
was filed on May 16, 2018 and was given Application No	

15/981.789 by the following Office "USPTO";

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"));

Application No.	Filing Date	Office
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PATENT ASSIGNMENT MS Docket No.: 404464-US-NP

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V	art.	1/6/2018
	Inventor's Signature	Date
	Andromachi CHATZIELEFTHERIC	DU
	Printed Name in English	Printed Name in Native Language
***************************************		(if other than English)

MS Docket No.: 404464-US-NP

l <u>John</u>	Christopher DAIN	$\underline{\Gamma Y}$ ("ASSIGNOR") am the c	original inventor or an original
joint invento	or of subject matte	er ("INVENTION") disclose	d and/or claimed in a patent
application	entitled "DISAGGE	EGATED DATA STORAC	<u>SE AND RETRIEVAL SYSTEM"</u>
("APPLICATIO	ON"), which:		
	ASSIGNEE'S legal LLC, One Microsof LEGAL REPRESENT the following Office	ASSIGNOR hereby auth representative, Microsoft to Way, Redmond, Washing ATIVES), to insert here in and given Application I to polication I to polication No., filing depolication No., filing depolication No.,	Technology Licensing, gton 98052 (ASSIGNEE'S parentheses (filed on Noby) this
		<u>16, 2018</u> and was given A e following Office " <u>USPTC</u>	
behalf of it desirous of right of prio patents deri	self and its succe acquiring, the enti- rity, in the INVENTI ived therefrom, suc nited States, its t	ssors and assigns ("ASSI re and exclusive rights, t ON and the APPLICATION h as continuing application	on limited liability company, on GNEE"), is entitled to, and is itle and interest, including the (and all other applications and ons, in whole or in part, in ancing countries ("APPLICATION
REPRESENTA	NTIVES to insert t		uests, ASSIGNEE'S LEGAL ng date, and Office into the hey are known;
Application	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Filing Date	Office
16/680,865		November 12, 2019	USPTO
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Inventor's Signature

John Christopher DAINTY

Printed Name in English

)ate

Jate

Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT	Γ MS Docket ?	No.: <u>404464-US-NP</u>
I James Hilton CLEGG ("A inventor of subject matter ('application entitled "DISAGGE" ("APPLICATION"), which:	"INVENTION") disclosed a	·
ASSIGNEE'S legal LLC, One Microsof LEGAL REPRESENT the following Office	ASSIGNOR hereby authorepresentative, Microsoft ft Way, Redmond, Washing ATIVES), to insert here in part and given Application No., filing da	Technology Licensing, gton 98052 (ASSIGNEE'S parentheses (filed on Noby
	16, 2018 and was given Ap e following Office " <u>USPTO</u>	
Microsoft Technology Lice behalf of itself and its success desirous of acquiring, the entire right of priority, in the INVENTIPE patents derived therefrom, successor the United States, its to DERIVATIVES"));	ssors and assigns ("ASSIO re and exclusive rights, ti ON and the APPLICATION (h as continuing applicatio	tle and interest, including the (and all other applications and ns, in whole or in part, in and
ASSIGNOR hereby REPRESENTATIVES to insert the following table for any APPLICA		g date, and Office into the
***************************************	······	Office
	November 12, 2019	USPTO

Page 1 of 2

MS Docket No.: 404464-US-NP

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James Il Clexa	30 hay 2018
Inventor's Signature	Date
James Hilton CLEGG	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I <u>Ralı</u>	<u>ıca Andre</u>	<u>ea DIACONU</u> ("AS	SIGNOR")	am the or	iginal ir	ventor or a	n original
joint invent	or of sub	ject matter ("INV	(ENTION")	disclosed	and/or	claimed in	a patent
application	entitled	"DISAGGREGATE	D DATA	STORAGE	AND	RETRIEVAL	SYSTEM'
("APPLICATION	ON"). whic	·h·					

MS Docket No.: <u>404464-US-NP</u>

will	be	filed.	ASSIGNOR	hereby	authorizes,	and	requests,
ASSI	GNE	E'S lega	l representat	ive, Micr	osoft Techn	ology	Licensing,
LLC,	One	Micros	oft Way, Redr	nond, Wa	ashington 98	052 (4	ASSIGNEE'S
LEG/	AL RI	EPRESEN	TATIVES), to	insert he	re in parenth	ieses (filed on
			and give	ո Applica	tion No		by
the	follo	wing Of	fice) this
APPI	_ICA ⁻	ΓΙΟΝ's Α	application No	o., filing o	late, and Off	ce, wh	ien known;

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MS Docket No.: 404464-US-NP

Miacon	May 29, 2018
Inventor's Signature	Date
Raluca Andreea DIACONU	Raluca Andreea DIACONU
Printed Name in English	Printed Name in Native Language
	(if other than English)

("APPLICATION"), which:

l <u>Rok</u>	as DREVII	NSKAS ('	'ASSIGNOR") am th	ne origin	al invent	or or an	orig	jinal joint
inventor of	subject	matter	("INVENTIC	ON") di	isclosed	and/or	claimed	in	a patent
application	entitled	"DISAGO	GREGATED	DATA	STORAG	GE AND	RETRIE	/AL	SYSTEM"

MS Docket No.: <u>404464-US-NP</u>

	will be filed. ASSIGNOR hereby authorizes, and requests
	ASSIGNEE'S legal representative, Microsoft Technology Licensing
	LLC, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S
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	and given Application No b
	the following Office
	APPLICATION's Application No., filing date, and Office, when
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\times	was filed on May 16, 2018 and was given Application No
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992	May 29, 2018
Inventor's Signature	Date
Rokas DREVINSKAS	
Printed Name in English	Printed Name in Native Language
	(if other than English)

DATENT	ASSIGNMENT	
K / 3 & 2 3 &	SACCRIVITY INTERIORS	

I Mengyang YANG ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "DISAGGREGATED DATA STORAGE AND RETRIEVAL SYSTEM" ("APPLICATION"), which:

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MS Docket No.: 404464-US-NP

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Application No.	Filing Date	Office
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x 2623	01-06-2018
Inventor's Signature	Date
Mengyang YANG	
Printed Name in English	Printed Name in Native Language
	(if other than English)