505797548 12/02/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

CONVEYING PARTY DATA

NATURE OF CONVEYANCE:

Name	Execution Date
THOMAS ANDREW SARTORIUS	11/25/2019
THOMAS PHILIP SPEIER	11/21/2019
MICHAEL SCOTT MCILVAINE	11/29/2019
JAMES NORRIS DIEFFENDERFER	11/26/2019
RODNEY WAYNE SMITH	11/21/2019

ASSIGNMENT

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:	16699808

CORRESPONDENCE DATA

Fax Number: (877)812-1249

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: 919-238-2300

Email: usdocket@microsoft.com

Correspondent Name: WITHROW + TERRANOVA

Address Line 1: 106 PINEDALE SPRINGS WAY

Address Line 4: CARY, NORTH CAROLINA 27511

ATTORNEY DOCKET NUMBER: 7006-029

NAME OF SUBMITTER: KAT M. KENNY

SIGNATURE: /Kat M. Kenny/

DATE SIGNED: 12/02/2019

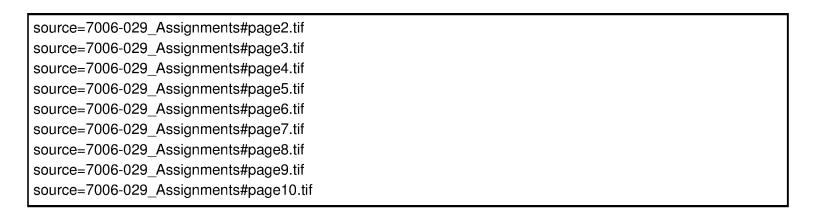
Total Attachments: 10

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PATENT REEL: 051147 FRAME: 0495

EPAS ID: PAT5844377

505797548



PATENT REEL: 051147 FRAME: 0496

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	•		disclosed and/or claimed in a
patent appl	ication entitled '	<u>'OBSOLETING VALUES S'</u>	TORED IN REGISTERS IN A
<u>PROCESSOR</u>	BASED ON	PROCESSING OBSOLES	SCENT REGISTER-ENCODED
INSTRUCTION	NS" ("APPLICATION"	"), which:	
\boxtimes	will be filed.	ASSIGNOR hereby auth	orizes, and requests,
		representative, Microsoft	
	•	ft Way, Redmond, Washing	3,
	•	TATIVES), to insert here	•
	/3.83	and	given Application
		***************************************	3 ,,
		by the following Offi	
		mark Office) this APPLICA	HON's Application No.,
	filing date, and O	ffice, when known;	
	was filed on	and was given	Application
		by the following Office	
		". ,	
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			n limited liability company, or
		•	GNEE"), is entitled to, and is
desirous of a	acquiring, the enti	re and exclusive rights, ti	tle and interest, including the
right of prior	ity, in the INVENTI	ON and the APPLICATION	(and all other applications and
patents deriv	ed therefrom, suc	h as continuing applicatio	ns, in whole or in part, in and
•		-	gn countries ("APPLICATION
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455161	NOR hereby	authorizes and regu	uests, ASSIGNEE'S LEGAI
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Application N	10.	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"));

Thomas Audur Sutran	11/25/19
Inventor's Signature	Date
Thomas Andrew SARTORIUS	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I Thomas Philip SPEIER ("ASSIGNOR") am the original inventor or an original joint

inventor of subject matte			-
application entitled "OBSO			
	G OBSOLESCENT RI	<u> GISTER-ENCODED INS</u>	<u>STRUCTIONS"</u>
("APPLICATION"), which:			
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LLC, One Micr LEGAL REPRE	osoft Way, Redmond, V SENTATIVES), to inser	crosoft Technology Lice /ashington 98052 (ASSIC t here in parentheses d given Appli	INEE'S (filed
		ng Office <u>US – United</u>	
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was filed on _	and was	given Application	
No	by the following	g Office	
Microsoft Technolog behalf of itself and its su desirous of acquiring, the right of priority, in the INVE patents derived therefrom, for the United States, in DERIVATIVES"));	iccessors and assigns entire and exclusive right. In an and the APPLIC such as continuing ap	ghts, title and interest, i ATION (and all other app plications, in whole or in	d to, and is ncluding the lications and part, in and
ASSIGNOR hereby	authorizes, and	requests, ASSIGNE	E'S LEGAL
REPRESENTATIVES to inser	t the Application No	., filing date, and Off	ice into the
following table for any APPI	ICATION DERIVATIVES	after they are known;	
Application No.	Filing Date	Office	

PATENT A	ASSIGNMENT	MS I	Docket No.:	407631-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"));

sufficient	11/21/19
Inventor's Signature	Date
Thomas Philip SPEIER	
Printed Name in English	Printed Name in Native Language
	(if other than English)

l <u>Michael Scott M</u>	<u>CILVAINE</u> ("ASSIGNOR") a	m the original inventor	or an original
joint inventor of subjec	t matter ("INVENTION")	disclosed and/or claime	ed in a patent
application entitled "OI	SOLETING VALUES STO	RED IN REGISTERS IN	A PROCESSOR
BASED ON PROCESS	ING OBSOLESCENT F	REGISTER-ENCODED IN	<u>NSTRUCTIONS</u> "
("APPLICATION"), which:			
oxtimes will be f	led. ASSIGNOR hereb	y authorizes, and re	equests,
ASSIGNEE'S	legal representative, M	icrosoft Technology Lic	ensing,
LLC, One N	licrosoft Way, Redmond,	Washington 98052 (ASS	IGNEE'S
LEGAL REI	RESENTATIVES), to inse	rt here in parenthese	s (filed
on	a	nd given App	lication
No	by the follow	ing Office <u>US – Unitec</u>	<u>l States</u>
<u>Patent and</u>	Trademark Office) this /	APPLICATION's Applicati	ion No.,
filing date,	and Office, when known		
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Microsoft Tachno	logy Licensing, LLC, a Wa	chinatan limitad liahilit	v company on
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DERIVATIVES"));		iii ioreigii commines	(/ () L. () () () ()
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	PPLICATION DERIVATIVES		
Application No.	Filing Date	Office	

PATENT A	ASSIGNMENT	MS	Docket No.:	407631-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"));

Mul Soft Mitol	11/29/19
Inventor's Signature	Date
Michael Scott MCILVAINE	
Printed Name in English	Printed Name in Native Language
	(if other than English)

original join patent appl <u>PROCESSOR</u>	t inventor of subjection	ect matter ("INVENTION " <u>OBSOLETING VALUES</u> PROCESSING OBSO	am the original inventor or an i") disclosed and/or claimed in a STORED IN REGISTERS IN A DLESCENT REGISTER-ENCODED
	ASSIGNEE'S legal LLC, One Microso LEGAL REPRESEN on No. Patent and Trade	representative, Micros ft Way, Redmond, Wash TATIVES), to insert h and by the following t	uthorizes, and requests, oft Technology Licensing, nington 98052 (ASSIGNEE'S ere in parentheses (filed given Application Office <u>US – United States</u> CATION's Application No.,
		and was giv by the following Of ";	• •
behalf of its desirous of a right of prior patents deriv	relf and its succe acquiring, the enti- rity, in the INVENTI red therefrom, suc- ited States, its t	ssors and assigns ("A re and exclusive rights ON and the APPUCATION h as continuing applica	gton limited liability company, on SSIGNEE"), is entitled to, and is , title and interest, including the DN (and all other applications and stions, in whole or in part, in and preign countries ("APPLICATION
REPRESENTA:	TIVES to insert t		equests, ASSIGNEE'S LEGAL iling date, and Office into the r they are known:
Application !		Filing Date	Office

PAIENI	ASSIGNMEN I	MS	Docket No.:	407631-US-NP

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Jun Dan Danfler	11-26-19
/Inventor's Signature	Date
James Norris DIEFFENDERFER Printed Name in English	Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT

I Rodney Wayne SMITH ("ASSIGNOR") am

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the origi	nal inven	itor or an	ori	gin	al joint	
sclosed	and/or	claimed	in	a	patent	

MS Docket No.: 407631-US-NP

inventor	of	subject	matter	("INV	'ENTION")	disclose	ed	and/or	clai	med	in	a	paten
application	on (entitled	"OBSOLE	TING	VALUES	STORED	IN	REGIST	ERS	IN A	<u>PR</u>	00	CESSOR
BASED	ON	PROC	ESSING	OBS	OLESCEN'	T REGIS	STE	R-ENCO	DED	IN	<u>STR</u>	UC	TIONS
("APPLICA	ATIC	N"), whi	ch:										

will b	e filed.	ASSIGNOR	hereby	authoriz	zes, and	requests,
ASSIGN	IEE'S lega	l representat	ive, Micr	osoft Te	chnology	Licensing,
LLC, O	ne Micros	oft Way, Redr	nond, Wa	ushingtor	98052 (ASSIGNEE'S
LEGAL	REPRESE	NTATIVES), t	o insert	here in	parenth	eses (filed
on			and	giv	en ,	Application
No		by the	following	g Office	<u>US – Un</u>	ited States
<u>Patent</u>	and Trad	<u>emark Office</u>	this API	PLICATIO	N's Appli	cation No.,
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	ASSIGN LLC, O LEGAL on No Patent filing d was file	ASSIGNEE'S legal LLC, One Micros LEGAL REPRESEI on No. Patent and Trad filing date, and Community was filed on No.	ASSIGNEE'S legal representat LLC, One Microsoft Way, Redr LEGAL REPRESENTATIVES), to on by the Patent and Trademark Office filing date, and Office, when I was filed on a No by the fe	ASSIGNEE'S legal representative, MicroLLC, One Microsoft Way, Redmond, WalleGAL REPRESENTATIVES), to insert on and No by the following Patent and Trademark Office) this API filing date, and Office, when known; was filed on and was go no by the following	ASSIGNEE'S legal representative, Microsoft Te LLC, One Microsoft Way, Redmond, Washington LEGAL REPRESENTATIVES), to insert here in on and giv No by the following Office Patent and Trademark Office) this APPLICATIO filing date, and Office, when known; was filed on and was given Application of the patent and was given and wa	No by the following Office <u>US - Un</u> <u>Patent and Trademark Office</u>) this APPLICATION's Appli 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	

 <u> </u>	

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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).

Radney Way Swith	11/21/2019
Inventor's Signature	Date
Rodney Wayne SMITH	
Printed Name in English	Printed Name in Native Language
	(if other than English)

RECORDED: 12/02/2019