PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4506149

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHAD MCBRIDE	03/25/2015
ANDRAS TANTOS	03/26/2015
JEFFREY BRADFORD	03/26/2015
BORIS BOBROV	03/26/2015
CHRISTOPHER JOHNSON	03/26/2015
STEVEN WHEELER	03/25/2015

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:	15651319

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.com

Correspondent Name: MICROSOFT CORPORATION

Address Line 1: ONE MICROSOFT WAY

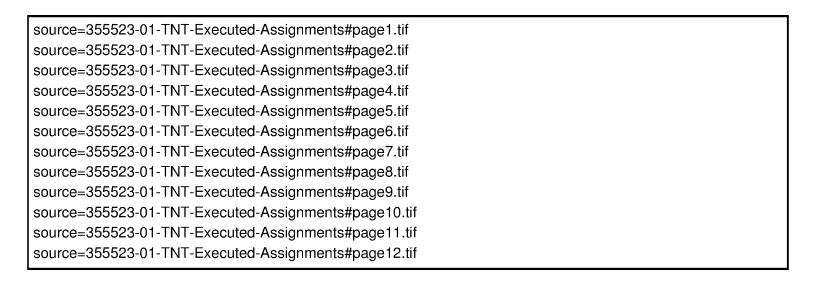
Address Line 4: REDMOND, WASHINGTON 98052

ATTORNEY DOCKET NUMBER:	355523-US-DIV[2]
NAME OF SUBMITTER:	LISA BIANCO
SIGNATURE:	/lisabianco/
DATE SIGNED:	07/17/2017

Total Attachments: 12

PATENT REEL: 043021 FRAME: 0972

504459448



PATENT REEL: 043021 FRAME: 0973

inventor of application	subject matter ('INVENTION") disclosed a <u>MEMORY ACCESS DESCR</u>	inventor or an original joint and/or claimed in a patent APTOR PROCESSING ACROSS
	ASSIGNEE'S legal LLC., One Mic (ASSIGNEE'S LEC parentheses (filed 14/671,811 USPTO	ASSIGNOR hereby authorepresentative, Microsoft rosoft Way, Redmond, AL REPRESENTATIVES), on March 27, 2015 and by the	Technology Licensing, Washington 98052 to insert here in digiven Application No. following Office APPLICATION's
· □		and was given A by the following Office ";	Application
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 I		Filing Date	Office
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	142.4014.4		
\\	11.1999		
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PATENT REEL: 043021 FRAME: 0974

PATENT ASSIGNMENT	MS Docket No.: 355523.01 TNT

Inventor's Signature	3/25/15 Date
_Chad McBride	Chad McBride
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, Andras Tantos ("ASSI inventor of subject matter (application entitled " <u>DIRECT</u> <u>MULTIPLE ENGINES</u> " ("APPLICATI	"INVENTION") disclosed a	•
ASSIGNEE'S legal LLC., One Mic (ASSIGNEE'S LEC parentheses (file No. 14/671 Office		Technology Licensing, Washington 98052 to insert here in and given Application the following _)this APPLICATION's
	and was given A by the following Office ";	Application
Microsoft Technology Lice behalf of itself and its success desirous of acquiring, the entire right of priority, in the INVENTIGATION patents derived therefrom, such for 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	ne Application No., filing	
Application No.	Filing Date	Office

	3/26/2015
Inventor's Signature	Date
	Andras Tantos
Andras Tantos	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, Jeffrey Bradford ("ASSIGNOR") am the original in inventor of subject matter ("INVENTION") disclosed and application entitled "DIRECT MEMORY ACCESS DESCRIPT MULTIPLE ENGINES" ("APPLICATION"), which:	d/or claimed in a patent
will be filed. ASSIGNOR hereby authorize ASSIGNEE'S legal representative, Microsoft Tellow, One Microsoft Way, Redmond, (ASSIGNEE'S LEGAL REPRESENTATIVES), to parentheses (filed on March 27, 2015 and gard 14/671,811 by the follow) this Application No., filing date, and Office, when keeping and the second seco	echnology Licensing, Washington 98052 o insert here in given Application No. Ilowing Office APPLICATION's
Was filed onand was given App Noby the following Office "";	olication
Microsoft Technology Licensing, LLC, a Washington Ii behalf of itself and its successors and assigns ("ASSIGNI desirous of acquiring, the entire and exclusive rights, title right of priority, in the INVENTION and the APPLICATION (an patents derived therefrom, such as continuing applications, for the United States, its territories, and all foreign DERIVATIVES"));	EE"), is entitled to, and is and interest, including the d all other applications and in whole or in part, in and
REPRESENTATIVES to insert the Application No., filing of	
following table for any APPLICATION DERIVATIVES after they Application No. Filing Date Of	
Application No. Printy Date Of	ffice

PATENT ASSIGNMENT	MS Docket No.: 355523.01 TNT

	26 March 2015	
Inventor's Signature	Date	
Jeffrey Bradford		
Printed Name in English	Printed Name in Native Language	
A.A. (113.) 2000	(if other than English)	

MS Docket No.:<u>355523.01 TNT</u>

I, Boris Bobrov ("ASSIC inventor of subject matter application entitled " <u>DIRECT</u> <u>MULTIPLE ENGINES</u> " ("APPLICAT	("INVENTION") disclosed MEMORY ACCESS DESC	inventor or an original joint and/or claimed in a patent <u>RIPTOR PROCESSING ACROSS</u>
ASSIGNEE'S legal LLC., One Mic (ASSIGNEE'S LEG parentheses (filed 14/671,811 USPTO	ASSIGNOR hereby authorepresentative, Microsoft representative, Microsoft rosoft Way, Redmond, GAL REPRESENTATIVES), and march 27, 2015 and by the)this iling date, and Office, whe	Technology Licensing, Washington 98052 to insert here in d given Application No. following Office APPLICATION's
No	and was given <i>i</i> by the following Office ";	Application
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
	•	ASS
	i]

PATENT ASSIGNMENT	MS Docket No.:355523.01 TN

AL	03/26/2015	
Inventor's Signature	Date	
Boris Bobrov		
Printed Name in English	Printed Name in Native Language (if other than English)	

inventor of application	subject matter ("INVENTION") disclosed MEMORY ACCESS DESCI	al inventor or an original joint and/or claimed in a patent RIPTOR PROCESSING ACROSS
	ASSIGNEE'S legal LLC., One Mic (ASSIGNEE'S LEC parentheses (filed 14/671,811 USPTO	ASSIGNOR hereby authorepresentative, Microsoft rosoft Way, Redmond, SAL REPRESENTATIVES), on March 27, 2015 and by the his ling date, and Office, whe	Technology Licensing, Washington 98052 to insert here in d given Application No. following Office APPLICATION's
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behalf of its desirous of a right of prior patents deriv	self and its succe acquiring, the enti- ity, in the INVENTI red therefrom, suc ited States, its t	ssors and assigns ("ASSI re and exclusive rights, ti ON and the APPLICATION h as continuing applicatio	n limited liability company, on GNEE"), is entitled to, and is tle and interest, including the (and all other applications and ns, in whole or in part, in and ign countries ("APPLICATION
REPRESENTA	TIVES to insert ti		g date, and Office into the
Application 1		TION DERIVATIVES after the Filing Date	Office
	4 C .	5 13 18 18 18 18 18 18 18 18 18 18 18 18 18	Viiice

huh	3/26/2015
Inventor's Signature	Date
Christopher Johnson	
Printed Name in English	Printed Name in Native Language
8.4	(if other than English)

I, Steven Wheeler ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "DIRECT MEMORY ACCESS DESCRIPTOR PROCESSING ACROSS MULTIPLE ENGINES" ("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 March 27, 2015 and given Application No. 14/671,811 the by following Office USPTO)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

C		

San Cla	25/a-15
Inventor's Signature	Date
Steven Wheeler	
Printed Name in English	Printed Name in Native Language
	(if other than English)