504299278 03/30/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4345959

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ADAM G. POULOS	02/28/2014
ARTHUR TOMLIN	03/04/2014
TONY AMBRUS	03/18/2014
JEFFREY COLE	03/15/2014
IAN DOUGLAS MCINTYRE	03/03/2014
DREW STEEDLY	03/03/2014
FREDERIK SCHAFFALITZKY	04/30/2014
GEORG KLEIN	03/11/2014
KATHLEEN P. MULCAHY	03/11/2014

RECEIVING PARTY DATA

Name:	MICROSOFT CORPORATION		
Street Address:	ONE MICROSOFT WAY		
City:	REDMOND		
State/Country:	WASHINGTON		
Postal Code:	98052		

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15474687

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: 425-707-9382

Email: usdocket@microsoft.com MICROSOFT CORPORATION Correspondent Name:

Address Line 1: ONE MICROSOFT WAY

Address Line 4: REDMOND, WASHINGTON 98052

ATTORNEY DOCKET NUMBER: 340626-US-CNT;WHG13321CON NAME OF SUBMITTER: CATHERINE POLANCE

PATENT REEL: 041801 FRAME: 0861

504299278

SIGNATURE:	/Catherine Polance/
DATE SIGNED:	03/30/2017

Total Attachments: 18

source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page1.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page2.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page3.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page4.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page5.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page6.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page7.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page8.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page9.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page10.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page11.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page12.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page13.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page14.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page15.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page16.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page17.tif source=Assignments (inventors to MS) 340626-US-CNT (WHG13321CON1)#page18.tif

> PATENT REEL: 041801 FRAME: 0862

MS Docket No.: WHG13321 I Adam G. Poulos ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "DETERMINING COORDINATE FRAMES IN A DYNAMIC ENVIRONMENT" ("APPLICATION"), which: oxtimes will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representatives, of the Law and Corporate Affairs

> Department, Microsoft Corporation, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert

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here in par	enthese	es (filed	on	May 1	, 2014	and	given
Application	No.	14/267,75	55	_ by	the	following	Office
				_)	this	APPLICA	TION's
Application N	lo., filin	g date, ar	nd Of	ffice, wl	hen kno	own;	
was filed on _		a	nd w	as give	n Appl	ication No	
	by	the follo	wing	Office			

Microsoft Corporation, a Washington Corporation, 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
15/474,687	March 30, 2017	USPTO

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"));

Agen Poulo	
	2/28/2014
Inventor's Signature	Date
Adam G. Poulos	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I <u>Arth</u>	<u>ur Tomlii</u>	<u>n</u> ("ASS	IGNOR")	am th	e original	invento	r or an	orig	jina	ıl joint
inventor of	subject	matter	("INVENT	TION")	disclosed	and/or	claimed	in	a	patent
application	entitled	" <u>DETE</u>	RMINING	CO	<u>ORDINATE</u>	FRAME	S IN	Α	DY	NAMIC
<u>ENVIRONMEN</u>	<u>IT</u> " ("APPL	ICATION	۱"), which	1:						

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Application No.	Filing Date	Office
15/474,687	March 30, 2017	USPTO

MS Docket No.: WHG13321

attal	3/4/2014
Inventor's Signature	Date
_Arthur Tomlin	
Printed Name in English	Printed Name in Native Language
	(if other than English)

PATENT ASSIGNMENT MS Docket No.: WHG13321

inventor of application	subject matter ("INVENTION") disclosed	inventor or an original join and/or claimed in a paten FRAMES IN A DYNAMIO
	ASSIGNEE'S legal Department, Micr Washington 9805 here in parenth Application No.	ASSIGNOR hereby authorepresentatives, of the Lawosoft Corporation, One Mig (ASSIGNEE'S LEGAL REPReses (filed on May 1, 2014/267,755 by thing date, and Office, whe	w and Corporate Affairs icrosoft Way, Redmond, ESENTATIVES), to insert 2014 and given the following Office his APPLICATION's
		and was given by the following Office	Application No
successors a entire and e INVENTION therefrom, s	nd assigns ("ASSIO xclusive rights, ti and the APPLICAT uch as continuing	GNEE"), is entitled to, and tle and interest, including TON (and all other appl	n, on behalf of itself and it is desirous of acquiring, the general the right of priority, in the ications and patents derived in part, in and for the United TION DERIVATIVES"));
	TIVES to insert t	•	uests, ASSIGNEE'S LEGA g date, and Office into the ney are known;
Application N 15/474,687		Filing Date March 30, 2017	Office USPTO

Page 1 of 2

MS Docke	t No.:	WHG13321
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	3/11/2014
Inventor's Signature	Date
Tony Ambrus Printed Name in English	Printed Name in Native Language (if other than English)

MS Docket No.: WHG13321

	11	eff	rey Cole	e ("ASS	SIGNOR")	am the	original	inve	entor (or an	orig	jinal jo	int inventor
of	subje	ct	matter	("INV	ENTION")	disclos	sed and	/or	claime	ed in	a p	oatent	application
en	titled	"Ľ	DETERMI	NING	COORE	NATE	FRAMES	<u> </u>	I A	DYN	AMIC	ENV	IRONMENT"
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15/474,687	Filing Date March 30, 2017	USPTO	
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PATENT.	ASSIGNMENT	MS Docket No.:	WHG13321
		 	

Left	3/15/2014
Inventor's Signature	Date
Jeffrey Cole	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I <u>lan Douglas McIntyre</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>DETERMINING COORDINATE FRAMES IN A DYNAMIC ENVIRONMENT</u>" ("APPLICATION"), which:

\times	will	be	filed.	ASSI	GNOR	here	eby a	aut	horize	s, a	ınd re	quests,
	ASSI	GNE	E'S legal	repre	sentati	ves,	of the	e La	aw and	l Cor	porate	Affairs
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Microsoft Corporation, a Washington Corporation, 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"));

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Application No.	Filing Date	Office
15/474,687	March 30, 2017	USPTO

MS Docket No.: WHG13321

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	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Inventor's Signature	03/03/14 Date
lan Douglas McIntyre	
Printed Name in English	Printed Name in Native Language (if other than English)

I <u>Drew Steedly</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>DETERMINING COORDINATE FRAMES IN A DYNAMIC ENVIRONMENT</u>" ("APPLICATION"), which:

\times	will	be	filed.	ASSIGNOR	hereby	authorize	es, and	red	լuests,
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	Depa	artm	ent, Micr	osoft Corpo	ration, O	ne Micros	oft Way,	Red	mond,
		_		2 (ASSIGNEE					
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15/474,687	March 30, 2017	USPTO

MS Docket No.: WHG13321

MS Docket No.: WHG13321

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

Drew Steedly

Printed Name in English

Printed Name in Native Language

(if other than English)

MS Docket No.: WHG13321

I <u>Frederik Schaffalitzky</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>DETERMINING COORDINATE FRAMES IN A DYNAMIC ENVIRONMENT</u>" ("APPLICATION"), which:

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March 30, 2017	USPTO
	March 30, 2017

Page 1 of 2

PATENT .	ASSIGNMENT	MS Docket No.:	WHG13321

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")):**

F. Schaffelingly Inventor's Signature	30 APR 2014 Date
Frederik Schaffalitzky Printed Name in English	Printed Name in Native Language
rimed name in English	(if other than English)

MS Docket No.: WHG13321

of subject r	natter ("INVENTIOI ETERMINING COO	N") disclosed and/or o	ntor or an original joint inventor laimed in a patent application <u>A DYNAMIC ENVIRONMENT</u> "
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INVENTION therefrom, s	and the APPLICAT	TION (and all other ap	ling the right of priority, in the oplications and patents derived or in part, in and for the United (ATION DERIVATIVES"));
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Application 15/474,687		Filing Date March 30, 2017	Office USPTO

Page 1 of 2

MS	Docket	No.:	WHG13321

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6/4	3/11/2014
Inventor's Signature	Date
Georg Klein	Georg Klein
Printed Name in English	Printed Name in Native Language
	(if other than English)

MS Docket No.: WHG13321

l <u>Kath</u>	leen P. M	<u>ulcahy</u> (("ASSIGNO	R") ar	n the origi	nal inven	tor or ar	n ori	ginal joint
inventor of	subject	matter	("INVENTI	ON")	disclosed	and/or	claimed	in	a patent
application	entitled	"DET	RMINING	<u>CO</u>	<u>ORDINATE</u>	FRAME	<u>S IN</u>	A	DYNAMIC
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PATENT ASSIGNMENT	MS Docket No.:	<u>WHG13321</u>

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Koth Me	3/11/2014
Inventor's Signature	Date
Kathleen P. Mulcahy Printed Name in English	Printed Name in Native Language
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RECORDED: 03/30/2017