504059071 10/20/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4105737

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JONATHAN STEED	10/25/2012
AARON KRAUSS	10/25/2012
MIKE SCAVEZZE	10/23/2012
WEI ZHANG	10/25/2012
ARTHUR TOMLIN	10/30/2012
TONY AMBRUS	10/29/2012
BRIAN MOUNT	10/19/2012
STEPHEN LATTA	10/29/2012
RYAN HASTINGS	10/25/2012

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:	15298528

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.comCorrespondent Name:MICROSOFT CORPORATION

Address Line 1: ONE MICROSOFT WAY

Address Line 4: REDMOND, WASHINGTON 98052

ATTORNEY DOCKET NUMBER: 336445-US-CNT

NAME OF SUBMITTER: CATHERINE POLANCE

PATENT 504059071 REEL: 040075 FRAME: 0301

SIGNATURE:	/Catherine Polance/
DATE SIGNED:	10/20/2016
Total Attachments: 18	
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PATENT REEL: 040075 FRAME: 0302

I, Jonathan Steed, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "CONSTRUCTING AUGMENTED REALITY ENVIRONMENT WITH PRECOMPUTED LIGHTING" ("APPLICATION"), which:

MS Docket No.: 336445.01

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	ASSI	GNE	E'S leg	al repre	sentati	ves,	of th	ie Law	and	Corpo	orate .	Affairs
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	Wasl	hingt	ton 98	052 (AS	SIGNEE	'S LE	GAL	REPRE	SENT	ATIVE	S), to	insert
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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 in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, 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
Application No. 15/298,528	Filing Date October 20, 2016	USPTO
13/296,326	October 20, 2010	00110

MS Docket No.: <u>336445.01</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 in the INVENTION and the APPLICATION (and 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

Jonathan Steed

Printed Name in English

Printed Name in Native Language

(if other than English)

inventor of subject matter application entitled "CONSTRUCOMPUTED LIGHTING" ("APPLIC	("INVENTION") disclosed a ICTING AUGMENTED REALI CATION"), which:	inventor or an original joint and/or claimed in a patent TY ENVIRONMENT WITH PRE-
	ASSIGNOR hereby auth	
	representatives, of the Lav rosoft Corporation, One Mi	· ·
·	52 (ASSIGNEE'S LEGAL REPR	• • • • • • • • • • • • • • • • • • • •
~	neses (filed on Novembe	
Application N	o. <u>13/668,953</u>	by the following
Office) this APPLICATION's
Application No.,	filing date, and Office, whe	n known;
was filed on	and was given	Application
	by the following Office	
	by the following Office ;	
	· · · · · · · · · · · · · · · · · · ·	
successors and assigns ("ASS entire and exclusive rights, ti	GNEE"), is entitled to, and tle and interest in the INV	n, on behalf of itself and its is desirous of acquiring, the ENTION and the APPLICATION
• •	•	refrom, such as continuing
		es, and all foreign countries
("APPLICATION DERIVATIVES"))	;	
ASSIGNOR hereby	authorizes, and requ	uests, ASSIGNEE'S LEGAL
REPRESENTATIVES to insert	the Application No., filing	g date, and Office into the
	ATION DEDIVATIVES after th	and and Imparime
following table for any APPLIC	TION DENIVATIVES after th	iey are known;
	Filing Date	Office
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Application No.	Filing Date	Office
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 in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES):

MARI	10/25/2012
Inventor's Signature	Date
Aaron Krauss	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, Mike Scavezze, ("ASS	IGNOR") am the original	inventor or an original joint				
inventor of subject matter	("INVENTION") disclosed	and/or claimed in a patent				
application entitled "CONSTRU	CTING AUGMENTED REAL	ITY ENVIRONMENT WITH PRE-				
COMPUTED LIGHTING" ("APPLIC	:ATION"), which:					
🛭 will be filed.	ASSIGNOR hereby auti	norizes, and requests,				
	representatives, of the La					
	osoft Corporation, One M	•				
•	Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert					
here in parenth	eses (filed on Novem	ber 5, 2012 and given				
Application N	o. <u>13/668,953</u>	by the following				
Office) this APPLICATION's				
	iling date, and Office, who					
was filed on	and was given	Application				
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	n.					
Microsoft Corporation,	a Washington Corporatio	on, on behalf of itself and its				
successors and assigns ("ASSI	GNEE"), is entitled to, and	d is desirous of acquiring, the				
		/ENTION and the APPLICATION				
(and all other applications	and patents derived th	erefrom, such as continuing				
		ies, and all foreign countries				
("APPLICATION DERIVATIVES"));						
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ASSIGNOR hereby	authorizes, and req	uests, ASSIGNEE'S LEGAL				
REPRESENTATIVES to insert t	he Application No., filir	ng date, and Office into the				
following table for any APPLICA	TION DERIVATIVES after t	hey are known;				
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15/298,528	October 20, 2016	USPTO				
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Page 1 of 2

MS Docket No.: 336445.01

MS Docket No.: <u>336445.01</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 in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

	10/23/2012_
Inventor's Signature	Date
Mike Scavezze	V
Printed Name in English	Printed Name in Native Language
	(if other than English)

of subject matter ("INVENTIO entitled "CONSTRUCTING AUG LIGHTING" ("APPLICATION"), wh will be filed. ASSIGNEE'S legal Department, Micr Washington 9805 here in parenth Application No	N") disclosed and/or clai MENTED REALITY ENVIRO	orizes, and requests, vand Corporate Affairs crosoft Way, Redmond, ESENTATIVES), to insert oer 5, 2012 and given by the following this APPLICATION's
No	and was given by the following Office ";	
Microsoft Corporation, successors and assigns ("ASSIGENTIFE and exclusive rights, tit (and all other applications applications, in and for the U("APPLICATION DERIVATIVES"));	GNEE"), is entitled to, and le and interest in the INV and patents derived the	ENTION and the APPLICATION refrom, such as continuing
ASSIGNOR hereby	authorizes, and requ	uests, ASSIGNEE'S LEGAL
REPRESENTATIVES to insert t	• •	
following table for any APPLICA		
	Filing Date	Office
15/298,528	October 20, 2016	USPTO

MS Docket No.: 336445.01

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 in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

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his	10/25/2012
Inventor's Signature	Date
Wei Zhang	<u> </u>
Printed Name in English	Printed Name in Native Language
20000000000000000000000000000000000000	(if other than English)

inventor of subject matter (application entitled "CONSTRU- COMPUTED LIGHTING" ("APPLIC Will be filed. ASSIGNEE'S legal Department, Micr Washington 9805 here in parenth Application No	"INVENTION") disclosed a CTING AUGMENTED REALI	TY ENVIRONMENT WITH PRE- orizes, and requests, v and Corporate Affairs crosoft Way, Redmond, ESENTATIVES), to insert or 5, 2012 and given by the following) this APPLICATION's
No	and was given by the following 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 in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));		
ASSIGNOR hereby REPRESENTATIVES to insert t	· · · · · · · · · · · · · · · · · · ·	uests, ASSIGNEE'S LEGAL g date, and Office into the
following table for any APPLICA	TION DERIVATIVES after th	ney are known;
Application No.	Filing Date	Office
15/298,528	October 20, 2016	USPTO

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 in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES):

1111	
ht land	10/30/2012
Inventor's Signature	Date
Arthur Tomlin	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I, Tony Ambrus, ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "CONSTRUCTING AUGMENTED REALITY ENVIRONMENT WITH PRECOMPUTED LIGHTING" ("APPLICATION"), which:
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
here in parentheses (filed on November 5, 2012 and given
Application No. <u>13/668,953</u> by the following Office
Application No., filing date, and Office, when known;
was filed on and was given Application
No by the following 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 in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));
ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL
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Application No. Filing Date Office
15/298,528 October 20, 2016 USPTO

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 in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

	ah	10/29/2012
1	nventor's Signature	Date
7	Fony Ambrus	
F	Printed Name in English	Printed Name in Native Language
		(if other than English)

I, Brian Mount, ("ASSIC	SNOR") am the original i	Inventor or an original join
inventor of subject matter ("INVENTION") disclosed :	and/or claimed in a pateni
application entitled "CONSTRU	CTING AUGMENTED REALI	TY ENVIRONMENT WITH PRE-
COMPUTED LIGHTING" ("APPLIC	ATION"), which:	
oxtimes will be filed.	ASSIGNOR hereby auth	orizes, and requests,
ASSIGNEE'S legal	representatives, of the Lav	w and Corporate Affairs
<u>-</u>	osoft Corporation, One Mi	•
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	by the following Office	
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Microsoft Corporation,	a Washington Corporation	n, on behalf of itself and its
successors and assigns ("ASSIC	-	
entire and exclusive rights, titl		,
(and all other applications a		
applications, in and for the U	·	·
("APPLICATION DERIVATIVES"));		, , , , , , , , , , , , , , , , , , , ,
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ASSIGNOR hereby	authorizes, and requ	uests, ASSIGNEE'S LEGAI
REPRESENTATIVES to insert ti	•	,
following table for any APPLICA		
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15/298,528	October 20, 2016	USPTO
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Page 1 of 2

INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

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 in the

MS Docket No.: 336445.01

0 0	
inventor's Signature Brian Mount	/6 - 19 - 2017
Printed Name in English	Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT	MS Docket No.: <u>336445.01</u>
I, Stephen Latta, ("ASSIGNOR") am the original inventor of subject matter ("INVENTION") disclosed application entitled "CONSTRUCTING AUGMENTED REAL COMPUTED LIGHTING" ("APPLICATION"), which: will be filed. ASSIGNOR hereby auth ASSIGNEE'S legal representatives, of the La Department, Microsoft Corporation, One M Washington 98052 (ASSIGNEE'S LEGAL REPRESENTED IN PROPERTY OF STATE OF STAT	and/or claimed in a patent LITY ENVIRONMENT WITH PRE- horizes, and requests, w and Corporate Affairs licrosoft Way, Redmond, RESENTATIVES), to insert oer 5, 2012 and given by the following _) this APPLICATION's
was filed on and was given	Application
No by the following Offic "";	e
Microsoft Corporation, a Washington Corporation successors and assigns ("ASSIGNEE"), is entitled to, and entire and exclusive rights, title and interest in the INV (and all other applications and patents derived the	d is desirous of acquiring, the /ENTION and the APPLICATION

its he NO ing applications, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

authorizes, ASSIGNOR hereby 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;

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Application No.	Filing Date	Office
15/298,528	October 20, 2016	USPTO
		AND MARKAGE WHITE
		4444

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 in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

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	10/29/12
Inventor's Signature	Date
Stephen Latta	
Printed Name in English	Printed Name in Native Language (if other than English)

MS Docket No.: <u>336445.01</u>

I, Ryan Hastings, ("ASSIGNOR") am the original inventor or an original joint
inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent
application entitled "CONSTRUCTING AUGMENTED REALITY ENVIRONMENT WITH PRE-
COMPUTED LIGHTING" ("APPLICATION"), which:
will be filed. ASSIGNOR hereby authorizes, and requests,
ASSIGNEE'S legal representatives, of the Law and Corporate Affairs
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Office
Application No., filing date, and Office, when known;
Application No., ming date, and office, when known,
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"
Minney & Company to a Markington Company to a bakaff of itself and its
Microsoft Corporation, a Washington Corporation, on behalf of itself and its
successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the
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ACCICATOR haveby nuthanimas and vanuacte ACCICATET'S LECAL
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Page 1 of 2

MS Docket No.: <u>336445.01</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 in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES):

Inventor's Signature	10/25/12 Date
Ryan Hastings	
Printed Name in English	Printed Name in Native Language
	(if other than English)