504051797 10/14/2016

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RANVEER CHANDRA	09/13/2016
ASHISH KAPOOR	10/14/2016
DEEPAK VASISHT	09/13/2016
SUDIPTA SINHA	09/13/2016

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:	15256566

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

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Address Line 4: REDMOND, WASHINGTON 98052

ATTORNEY DOCKET NUMBER:	360710.01
NAME OF SUBMITTER:	BRIAN T. RIVERS
SIGNATURE:	/Brian T. Rivers/
DATE SIGNED:	10/14/2016

Total Attachments: 8

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PATENT 504051797 REEL: 040023 FRAME: 0476

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> PATENT REEL: 040023 FRAME: 0477

PATENT ASSIGNMENT MS Docket No.: 360710.01 I Ashish Kapoor ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "GENERATING REAL-TIME SENSOR MAPS FROM VIDEOS AND IN-GROUND SENSOR DATA"), 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 September 3, 2016 and was given Application. by the following Office No 15/256,566 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")): hereby authorizes. and requests. ASSIGNEE'S ASSIGNOR 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

Page 1 of 2

PATENT	ASSIGNMENT	MS Docket No.:	360710.01

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, 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).

July Off	Oct 14, 2016
Inventor's Signature	Date
<u>Ashish Kapoor</u>	
Printed Name in English	Printed Name in Native Language
	(if other than English)

PATENT ASSIGNMENT MS Docket No.: 360710.01 I <u>Deepak Vasisht</u> ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "GENERATING REAL-TIME SENSOR MAPS FROM VIDEOS AND IN-GROUND SENSOR DATA"), 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. the by) this APPLICATION's Office Application No., filing date, and Office, when known; was filed on September 3, 2016 and was given Application No <u>15/256,566</u> 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"));

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Application No.	Filing Date	Office

Page 1 of 2

PATENT REEL: 040023 FRAME: 0480

PATENT ASSIGNMENT

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MS Docket No.: 360710.01

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Durante	09 3 20 6
Inventor's Signature	Date
Deepak Vasisht	
Printed Name in English	Printed Name in Native Language
	(if other than English)

	PATENT A	ASSIGNMENT	MS Docket No.: 360710.01
	Ranveer Chandra		("ASSIGNOR") am tho
and/or claim	ed in a patent app	joint inventor of subject n	matter ("INVENTION") disclosed TING REAL-TIME SENSOR MAPS
	ASSIGNEE'S legal LLC., One Mic (ASSIGNEE'S LEC parentheses (filed No. Office Application No., fi	ASSIGNOR hereby auth representative, Microsoft rosoft Way, Redmond, GAL REPRESENTATIVES), d on by	Technology Licensing, Washington 98052 to insert here in and given Application the following this APPLICATION's in known;
i⊠.		ember 3, 2016 and was given by the form	
behalf of its desirous of a right of prior patents deriv	self and its succes acquiring, the ention rity, in the INVENTION red therefrom, succited States, its t	ssors and assigns ("ASSII re and exclusive rights, ti ON and the APPLICATION h as continuing applicatio	in limited liability company, or GNEE"), is entitled to, and is itle and interest, including the (and all other applications and ons, in whole or in part, in and ign countries ("APPLICATION
	TIVES to insert th		uests, ASSIGNEE'S LEGAI g date, and Office into the ney are known;
Application N		Filing Date	Office
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PATENT.	ASSIGNMENT	MS Docket No.:	360710.01

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Raweer Chan 13th September, 2016		
Inventor's Signature	Date	
Ranveer Chandra		
Printed Name in English	Printed Name in Native Language	
	(if other than English)	

PATENT ASSIGNMENT MS Docket No.: 360710.01 ("ASSIGNOR") am the I Sudipta Sinha original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "GENERATING REAL-TIME SENSOR MAPS FROM VIDEOS AND IN-GROUND SENSOR DATA"), 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 by the following No. Office Application No., filing date, and Office, when known; was filed on September 3, 2016 and was given Application No <u>15/256,566</u> 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")): ASSIGNOR

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SuSinha	09/13/2016	
Inventor's Signature	Date	
Sudipta Sinha		
Printed Name in English	Printed Name in Native Language	
	(if other than English)	

RECORDED: 10/14/2016