506386605 12/04/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6433361

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WENJIE SHI	12/04/2020
ZIRAN WU	12/04/2020
ONJI BAE	12/02/2020
MICHAEL JEFFREY AJAX	11/30/2020
NAVEEN THUMPUDI	11/30/2020
MEI LING WILSON	11/30/2020

RECEIVING PARTY DATA

Name:	ame: 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:	17112561	

CORRESPONDENCE DATA

Fax Number: (801)532-7543

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: 801-532-1500

mspatent@rgn.com, usdocket@microsoft.com Email: RAY QUINNEY & NEBEKER - MICROSOFT **Correspondent Name:**

Address Line 1: 36 SOUTH STATE STREET

Address Line 2: **SUITE 1400**

Address Line 4: SALT LAKE CITY, UTAH 84111

ATTORNEY DOCKET NUMBER:	409086-US-NP	
NAME OF SUBMITTER:	JOHN O. CARPENTER	
SIGNATURE:	/John O. Carpenter, Reg.# 73862/	
DATE SIGNED:	12/04/2020	

PATENT REEL: 054551 FRAME: 0651 506386605

Total Attachments: 12 source=409086-US-NP_2020-12-04_Assignment#page1.tif source=409086-US-NP_2020-12-04_Assignment#page2.tif source=409086-US-NP_2020-12-04_Assignment#page3.tif source=409086-US-NP_2020-12-04_Assignment#page4.tif source=409086-US-NP_2020-12-04_Assignment#page5.tif source=409086-US-NP_2020-12-04_Assignment#page6.tif source=409086-US-NP_2020-12-04_Assignment#page7.tif source=409086-US-NP_2020-12-04_Assignment#page8.tif source=409086-US-NP_2020-12-04_Assignment#page9.tif source=409086-US-NP_2020-12-04_Assignment#page10.tif source=409086-US-NP_2020-12-04_Assignment#page11.tif source=409086-US-NP_2020-12-04_Assignment#page11.tif

PATENT REEL: 054551 FRAME: 0652

I <u>Wenjie SHI</u> ("ASSIGNOF subject matter ("INVENTION")		ra, mangkal menalah dialah merina kembanah Mili keralah 1974	
"SYSTEMS AND METHODS FO			
<u>VIA A CAMERA SENSOR" ("APPI</u>			
⊠ will be filed.	ASSIGNOR hereb	y authorizes, and r	equests,
ASSIGNEE'S lega LLC. One Micros	l representative, Mi	crosoft Technology Li Vashington 98052 (AS	censing,
LEGAL REPRESEI	vTATIVES), to inse	rt here in parenthes	es (filed
on <u>Decembe</u>	er 4, 2020 ar	id given Ap	plication
No. 17/112,561	by the followi	ng Office <u>US – Unite</u>	d States
Patent and Trad	<u>emark Office</u>) this A	PPLICATION's Applicat	ion No.,
filing date, and (Office, when known:		
was filed on			
No	by the followin	g Office	ari di garanda da padanan katalahan 1887 - Kalanda Bara
*	***		
Microsoft Technology L	icensing, LLC, a Was	shington limited liabili	ty company, on
behalf of itself and its succ	essors and assigns	("ASSIGNEE"), is entit	ded to, and is
desirous of acquiring, the ent	ire and exclusive ri	ghts, title and interest	, including the
right of priority, in the INVENT	TON and the APPLIC	ATION (and all other a	pplications and
patents derived therefrom, su			An air. Aid ar Colotta (2004) i dhal
for the United States, its	territories, and a	ll foreign countries	("APPLICATION
DERIVATIVES"));			
ASSIGNOR hereby			
REPRESENTATIVES to insert			Office into the
following table for any APPLIC			
Application No.	Filing Date	Office	

PATENT ASSIGNMENT	MS Docket No.: 409086-US-NP
acknowledged by the ASSIGNOR, the the ASSIGNEE, ASSIGNOR's entire and right of priority, in the INVENTION are patents derived therefrom, such as c	onsideration, the receipt of which is herebed ASSIGNOR hereby sells, assigns and transfers to dexclusive rights, title and interest, including the applications and the APPLICATION (and all other applications and continuing applications, in whole or in part, in another, and all foreign countries ("APPLICATION")
nd perfecting title to the APPLICATION	rived therefrom, and for the purpose of protecting
	ON (and AFFERCATION DERIVATIVES).
4.3	12/4/2020
	12/4/2020 Date
لَمِينُ Inventor's Signature	12/4/2020 Date
Inventor's Signature Wenjie SHI	12/4/2020 Date
لَمِينُ Inventor's Signature	12/4/2020 Date Printed Name in Native Language
Inventor's Signature Wenjie SHI Printed Name in English	12/4/2020 Date
Inventor's Signature Wenjie SHI Printed Name in English	12/4/2020 Date Printed Name in Native Language (if other than English)
Inventor's Signature Wenjie SHI Printed Name in English	Date Printed Name in Native Language (if other than English)
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Inventor's Signature Wenjie SHI Printed Name in English	Date Printed Name in Native Language (if other than English)
Inventor's Signature Wenjie SHI Printed Name in English	Date Printed Name in Native Language (if other than English)
Inventor's Signature Wenjie SHI Printed Name in English	12/4/2020 Date Printed Name in Native Language (if other than English)

I ZUZZ XU (ASSICHOR) are the original inventor or an original joint inventor of
subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled
SYSTEMS AND METHODS FOR PROVIDING HUMAN INTERVACE DRYKE INFORMATION
YAACAMERASENSOR" (APPLICATION"), which

8	will be filed. ASSICNOR hereby authorizes, and requests.
	ASSICNEE'S legal representative, Microsoft Technology Licensing,
	LLC, One Microsoft Way, Redmond, Washington 98052 (ASSKINES
	LECAL REPRESENTATIVES), to insert here in parentheses (filed
	on <u>December 4, 2020</u> and given Application
	No. 17/112,561 by the following Office US - United States
	<u>Patent and Trademark Office</u>) this APPLICATION's Application No., filling date, and Office, when known;
	was filed on and was given Application
	No by the following Office
	8 - X ₂

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")):

Application No.	y .	Office

PATENT ASSEMBLY	MN	Dockel No.:	422000-US-N
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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")):

Mun	12/4/2020
Inventor's Signature	Date
Ziran WU	
Printed Name in English	Printed Name in Native Language
	(if other than English)

MS Docket No.: 409086-US-NP

I <u>Onji BAE</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>SYSTEMS AND METHODS FOR PROVIDING HUMAN INTERFACE DEVICE INFORMATION VIA A CAMERA SENSOR</u>" ("APPLICATION"), which:

\boxtimes	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 December 4, 2020 and given Application
	No. 17/12,561 by the following Office US - United States
	Patent and Trademark Office) this APPLICATION's Application No.,
	filing date, and Office, when known;
	was filed on and was given Application
	No by the following Office
	8,

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"));

Application No.		
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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"));

	23 12/2/2020
Inventor's Signature	Date
Onji BAE	<u> </u>
Printed Name in English	Printed Name in Native Language (if other than English)

MS Docket No.: 409086-US-NP

I <u>Michael Jeffrey AJAX</u> ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "SYSTEMS AND METHODS FOR PROVIDING HUMAN INTERFACE <u>DEVICE INFORMATION VIA A CAMERA SENSOR</u>" ("APPLICATION"), which:

\boxtimes	will be filed. ASSIGNOR hereby authorizes, and reques	its,
	ASSIGNEE'S legal representative, Microsoft Technology Licensi	ng,
	LLC, One Microsoft Way, Redmond, Washington 98052 (ASSIGNE	E'S
	LEGAL REPRESENTATIVES), to insert here in parentheses (fi	led
	on December 4, 2020 and given Applicat	ion
	No. 17/112,561 by the following Office US - United Sta	tes
	Patent and Trademark Office) this APPLICATION's Application N	lo.,
	filing date, and Office, when known;	
	was filed on and was given Application	
	Noby the following Office	
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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"));

Application No.	Filing Date	Office	····

PATENT ASSIGNMENT			MS Dock	et No.:	409086	<u>.US-:NI</u>
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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")):

Mil Di	11/30/20	
Inventor's Signature	Date	
Michael Jeffrey AJAX		
Printed Name in English	Printed Name in Native	Language
	(if other than English)	

I <u>Naveen THUMPUDI</u> ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "SYSTEMS AND METHODS FOR PROVIDING HUMAN INTERFACE <u>DEVICE INFORMATION VIA A CAMERA SENSOR</u>" ("APPLICATION"), which:

X	will be	filed.	ASSIGNOR	hereby	authoria	es, and	requests,
	ASSIGN	EE'S lega	l representat	tive, Mici	osoft Te	chnology	Licensing,
	LLC, Or	ne Micros	oft Way, Redi	mond, Wa	ashingtor	98052 (ASSIGNEE'S
	LEGAL	REPRESE	NTATIVES), t	o insert	here in	parenth	eses (filed
	on	Decembe	er 4, 2020	and	giv	en /	Application
	No. <u>17/</u>	112,561	by the	following	Office	<u>US – Un</u>	ited States
	Patent a	and Trade	<u>emark Office</u>) this API	PLICATIO	N's Appli	cation No.,
	filing d	ate, and (Office, when	known;			
	was file	d on	·	and was	given App	olication	
	No		by the f	ollowing	Office		
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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"));

Application No.	Filing Date	Office
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PATENT ASSIGNMENT	MS Docket No.:	409086-US-NI

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"));

Inventor's Signature	ロate
Naveen THUMPUDI	***************************************
Printed Name in English	Printed Name in Native Language
	(if other than English)

I <u>Mei Ling WILSON</u> ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "SYSTEMS AND METHODS FOR PROVIDING HUMAN INTERFACE <u>DEVICE INFORMATION VIA A CAMERA SENSOR</u>" ("APPLICATION"), which:

will	be	filed.	ASSIGN	IOR	herel	у а	utho	rizes,	and	req	uests,
ASSIC	SNEE	E'S legal	represe	entat	tive, M	icros	oft T	echn-	ology	Lice	nsing,
LLC,	One	Microsc	oft Way,	Redi	mond,	Wash	ningto	on 98	052 (4	ASSIC	NEE'S
LEGA	L R	EPRESEN	ITATIVES	s), t	o inse	ert h	ere	in pa	renth	eses	(filed
on		December	4, 2020		a	nd	g	iven	A	Appli	cation
No.	17/1	12,561	by	the	follow	ing	Office	us_	- Uni	ted	States
<u>Paten</u>	it ar	<u>id Trade</u>	mark O	ffice) this /	APPLI	ICATI	ON's	Appli	catio	n No.,
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	ASSIC LLC, LEGA on No Paten filing was f	ASSIGNEE LLC, One LEGAL R on 17/1 Patent ar filing dat was filed No	ASSIGNEE'S legal LLC, One Microso LEGAL REPRESEN on December No. 17/112,561 Patent and Trade filing date, and O was filed on No	ASSIGNEE'S legal represe LLC, One Microsoft Way, LEGAL REPRESENTATIVES on December 4, 2020 No. 17/112,561 by Patent and Trademark Of filing date, and Office, wh was filed on by t	ASSIGNEE'S legal representate LLC, One Microsoft Way, Reducted LEGAL REPRESENTATIVES), ton December 4, 2020 No. 17/112,561 by the Patent and Trademark Office filing date, and Office, when least on by the Mass filed on by the form by the files.	ASSIGNEE'S legal representative, M LLC, One Microsoft Way, Redmond, LEGAL REPRESENTATIVES), to inse on December 4, 2020 a No. 17/112,561 by the follow Patent and Trademark Office) this A filing date, and Office, when known was filed on and wa No by the followin	ASSIGNEE'S legal representative, Micros LLC, One Microsoft Way, Redmond, Wash LEGAL REPRESENTATIVES), to insert hon December 4, 2020 and No. 17/112,561 by the following Patent and Trademark Office) this APPL filing date, and Office, when known; was filed on and was given to the many statements of the many statem	ASSIGNEE'S legal representative, Microsoft TLLC, One Microsoft Way, Redmond, Washington LEGAL REPRESENTATIVES), to insert here on December 4, 2020 and gono. 17/112,561 by the following Office Patent and Trademark Office) this APPLICATI filing date, and Office, when known; was filed on and was given Application and was given Application by the following Office	ASSIGNEE'S legal representative, Microsoft Technol. LLC, One Microsoft Way, Redmond, Washington 98 LEGAL REPRESENTATIVES), to insert here in part on December 4, 2020 and given No. 17/112,561 by the following Office US Patent and Trademark Office) this APPLICATION's filing date, and Office, when known; was filed on and was given Application and was given Application by the following Office	ASSIGNEE'S legal representative, Microsoft Technology LLC, One Microsoft Way, Redmond, Washington 98052 (A LEGAL REPRESENTATIVES), to insert here in parenthe on December 4, 2020 and given A No. 17/112,561 by the following Office US – Unit Patent and Trademark Office) this APPLICATION's Application date, and Office, when known; was filed on and was given Application No by the following Office	No. 17/112,561 by the following Office US - United Patent and Trademark Office) this APPLICATION's Application 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"));

Application No.	Filing Date	Office	

PATENT ASSIGNMENT	MS Do	ocket No.:	409086-US-NP

PATENT ASSIGNMENT

RECORDED: 12/04/2020

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 **S**ignature Date Mei Ling WILSON Printed Name in English Printed Name in Native Language (if other than English)