505657521 09/05/2019 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5704326

SUBMISSION TYPE:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:	ASSIGNMENT	ASSIGNMENT	
CONVEYING PARTY DATA			
	Name	Execution Date	
DANIEL JOSEPH MCCULLOCH		07/05/2016	
NICHOLAS GERVASE FAJT		07/07/2016	
ADAM G. POULOS		06/30/2016	
CHRISTOPHER DOUGLAS EDM	ONDS	07/14/2016	
LEV CHERKASHIN		07/05/2016	
BRENT CHARLES ALLEN		08/11/2016	
CONSTANTIN DULU		06/29/2016	
MUHAMMAD JABIR KAPASI		06/29/2016	
MICHAEL GRABNER		07/05/2016	
MICHAEL EDWARD SAMPLES		07/15/2016	
CECILIA BONG		07/05/2016	
MIGUEL ANGEL SUSFFALICH		08/02/2016	
VARUN RAMESH MANI		06/29/2016	
ANTHONY JAMES AMBRUS		07/15/2016	
ARTHUR C. TOMLIN		06/29/2016	
JAMES GERARD DACK		07/05/2016	
JEFFREY ALAN KOHLER		06/29/2016	
ERIC S. REHMEYER		06/29/2016	
EDWARD D. PARKER		07/22/2016	

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:	15199742

CORRESPONDENCE DATA

Fax Number:

(509)381-3110

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:	4257040152
Email:	usdocket@microsoft.com
Correspondent Name:	MICROSOFT CORPORATION
Address Line 1:	ONE MICROSOFT WAY
Address Line 4:	REDMOND, WASHINGTON 98052

ATTORNEY DOCKET NUMBER:	359354-US-NP
NAME OF SUBMITTER:	ALEX LEA
SIGNATURE:	/alex lea/
DATE SIGNED:	09/05/2019

Total Attachments: 38

Total Attachments. So	
source=359354-US-NP_Executed_Assignments#page1.t	if
source=359354-US-NP_Executed_Assignments#page2.t	if
source=359354-US-NP_Executed_Assignments#page3.t	if
source=359354-US-NP_Executed_Assignments#page4.t	if
source=359354-US-NP_Executed_Assignments#page5.t	if
source=359354-US-NP_Executed_Assignments#page6.t	if
source=359354-US-NP_Executed_Assignments#page7.t	if
source=359354-US-NP_Executed_Assignments#page8.t	if
source=359354-US-NP_Executed_Assignments#page9.t	if
source=359354-US-NP_Executed_Assignments#page10	.tif
source=359354-US-NP_Executed_Assignments#page11	.tif
source=359354-US-NP_Executed_Assignments#page12	.tif
source=359354-US-NP_Executed_Assignments#page13	.tif
source=359354-US-NP_Executed_Assignments#page14	.tif
source=359354-US-NP_Executed_Assignments#page15	.tif
source=359354-US-NP_Executed_Assignments#page16	.tif
source=359354-US-NP_Executed_Assignments#page17	.tif
source=359354-US-NP_Executed_Assignments#page18	.tif
source=359354-US-NP_Executed_Assignments#page19	.tif
source=359354-US-NP_Executed_Assignments#page20	.tif
source=359354-US-NP_Executed_Assignments#page21	.tif
source=359354-US-NP_Executed_Assignments#page22	.tif
source=359354-US-NP_Executed_Assignments#page23	.tif
source=359354-US-NP_Executed_Assignments#page24	.tif
source=359354-US-NP_Executed_Assignments#page25	.tif
source=359354-US-NP_Executed_Assignments#page26	.tif
source=359354-US-NP_Executed_Assignments#page27	.tif
source=359354-US-NP_Executed_Assignments#page28	.tif
source=359354-US-NP_Executed_Assignments#page29	.tif
source=359354-US-NP_Executed_Assignments#page30	.tif
source=359354-US-NP_Executed_Assignments#page31	.tif
source=359354-US-NP_Executed_Assignments#page32	.tif

source=359354-US-NP_Executed_Assignments#page33.tif	
source=359354-US-NP_Executed_Assignments#page34.tif	
source=359354-US-NP_Executed_Assignments#page35.tif	
source=359354-US-NP_Executed_Assignments#page36.tif	
source=359354-US-NP_Executed_Assignments#page37.tif	
source=359354-US-NP_Executed_Assignments#page38.tif	

I <u>Daniel Joseph McCulloch</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>Camera-Based Input Device</u>" ("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 ______ and given Application No. _____ by the following Office ______) this APPLICATION's Application No., filing date, and Office, when known;

was filed on June 30, 2016 and was given Application No <u>15/199,742</u> by the following Office "<u>US – United States Patent and</u> <u>Trademark Office</u>";

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 Docket No.: <u>359354.01</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, 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"));

Daniel McCulloch	7/5/2016
Inventor's Signature	Date
Daniel Joseph McCulloch	
Printed Name in English	Printed Name in Native Language
	(if other than English)

PATENT ASSIGNMENT

I <u>Nicholas Gervase Fait</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>Camera-Based Input Device</u>" ("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 ________ and given Application No. _______ by the following Office ________) this APPLICATION's Application No., filing date, and Office, when known;

was filed on June 30, 2016 and was given Application No <u>15/199.742</u> by the following Office <u>US - United States Patent and Trademark Office</u>:

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
	ý · · · · · · · · · · · · · · · · · · ·	

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 liligation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

Page 1 of 2

PATENT ASSIGNMENT

MS Docket No : <u>359354.01</u>

Inventor's Signature

Nicholas Gervase Fajl Printed Name in English

Date 7.7.16

Printed Name in Native Language (if other than English)

Page 2 of 2

I <u>Adam G. Poulos</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>Camera-Based Input Device</u>" ("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 <u>June 30, 2016</u> and given Application No. <u>15/199,742</u> by the following Office <u>US</u>) 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"));

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, 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"));

Aler Parles	6/30/2016
Inventor's Signature	Date
Adam G. Poulos Printed Name in English	Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT MS Docket No.: <u>359354.01</u>

I <u>Christopher Douglas Edmonds</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>Camera-Based Input Device</u>" ("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 _______ and given Application No. ______ by
 the following Office _______) this
 APPLICATION's Application No., filing date, and Office, when known;

was filed on <u>June 30, 2016</u> and was given Application No <u>15/199,742</u> by the following Office "<u>US - United States Patent and</u> <u>Trademark Office</u>";

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

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"));

Christophun Edmonde	7/14/16
Inventor's Signature	Date
Christopher Douglas Edmonds	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I <u>Lev Cherkashin</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>Camera-Based Input Device</u>" ("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 ______ and given Application No. _____ by the following Office ______) this APPLICATION's Application No., filing date, and Office, when known;

was filed on June 30, 2016 and was given Application No <u>15/199,742</u> by the following Office "<u>US - United States Patent and</u> <u>Trademark Office</u>";

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	

Page 1 of 2

PATENT ASSIGNMENT

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

Printed Name in English

Lev Cherkashin

Date

_____07/0*5/2016* ate <u>Лев Черкаш</u>ин

Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT

I <u>Brent Charles Allen</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>Camera-Based Input Device</u>" ("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 ______ and given Application No. ______ by the following Office ______) this APPLICATION's Application No., filing date, and Office, when known;
- was filed on <u>June 30, 2016</u> and was given Application No <u>15/199,742</u> by the following Office "<u>US - United States Patent and</u> <u>Trademark Office</u>";

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"));

A	pplication No.	Filing Date	Office	
Ę				

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"));

2016-08-11 Inventor's Signature Date **Brent Charles Allen** Printed Name in English Printed Name in Native Language (if other than English)

I <u>Constantin Dulu</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>Camera-Based Input Device</u>" ("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 June 30, 2016 and given Application No. 15/199,742 by
 the following Office US 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

Page 1 of 2

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

Constantin Dulu Printed Name in English

Printed Name in Native Language (if other than English)

61291224

Page 2 of 2

I <u>Muhammad Jabir Kapasi</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>Camera-Based Input Device</u>" ("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 June 30, 2016 and given Application No. 15/199,742 by
 the following Office US ______) 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"));

Application No.	Filing Date	Office

PATENT ASSIGNMENT

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

06/29/16

Date

Muhammad Jabir Kapasi Printed Name in English

Printed Name in Native Language (if other than English)

Page 2 of 2

I <u>Michael Grabner</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>Camera-Based Input Device</u>" ("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 ______ and given Application No. _____ by the following Office ______) this APPLICATION's Application No., filing date, and Office, when known;

was filed on June 30, 2016 and was given Application No <u>15/199,742</u> by the following Office "<u>US – United States Patent and</u> <u>Trademark Office</u>";

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

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).

entor's Signature

Michael Grabner Printed Name in English 7/5/2016

Date

MICHAEL GRABNER

Printed Name in Native Language (if other than English)

Page 2 of 2

I <u>Michael Edward Samples</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>Camera-Based Input Device</u>" ("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 _______ and given Application No. _______ by
 the following Office _______) this
 APPLICATION's Application No., filing date, and Office, when known;
- was filed on June 30, 2016 and was given Application No <u>15/199,742</u> by the following Office "<u>US – United States Patent and</u> <u>Trademark Office</u>";

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	
· · · · · · · · · · · · · · · · · · ·			
			·····
		······	
······			

Page 1 of 2

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"));

145	7/15/2016
Inventor's Signature	Date
Michael Edward Samples	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I <u>Cecilia Bong</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>Camera-Based Input Device</u>" ("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 ______ and given Application No. _____ by the following Office ______) this APPLICATION's Application No., filing date, and Office, when known;

was filed on <u>June 30, 2016</u> and was given Application No <u>15/199,742</u> by the following Office "<u>US – United States Patent and</u> <u>Trademark Office</u>";

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
······		

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 Date Cecilia Bong Printed Name in English Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT MS Docket No.: 359354.01
--

I <u>Miguel Angel Susffalich</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>Camera-Based Input Device</u>" ("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 ______ and given Application No. _____ by the following Office ______) this APPLICATION's Application No., filing date, and Office, when known;

was filed on June 30, 2016 and was given Application No <u>15/199,742</u> by the following Office "<u>US – United States Patent and</u> <u>Trademark Office</u>";

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

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).

68/02/2016 Inventor's Signature Date Miguel Angel Susffalich Printed Name in English Printed Name in Native Language (if other than English)

Page 2 of 2

I <u>Varun Ramesh Mani</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>Camera-Based Input Device</u>" ("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 <u>June 30, 2016</u> and given Application No. <u>15/199,742</u> by the following Office <u>US</u> 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"));

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, 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).

6-29-16 Inventor's Signature Date Varun Ramesh Mani Printed Name in English Printed Name in Native Language (if other than English)

Page 2 of 2

PATENT ASSIGNMENT MS DOCKETNO.: <u>339334.0</u>	PATENT ASSIGNMENT	MS Docket No.:	<u>359354.01</u>
---	-------------------	----------------	------------------

I <u>Anthony James Ambrus</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>Camera-Based Input Device</u>" ("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 ______ and given Application No. _____ by the following Office ______) this APPLICATION's Application No., filing date, and Office, when known;

was filed on June 30, 2016 and was given Application No <u>15/199,742</u> by the following Office "<u>US – United States Patent and</u> <u>Trademark Office</u>";

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 Docket No.: <u>359354.01</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, 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"));

Antones	7/15/2016
Inventor's Signature	Date
Anthony James Ambrus	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I <u>Arthur C. Tomlin</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>Camera-Based Input Device</u>" ("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 <u>June 30, 2016</u> and given Application No. <u>15/199,742</u> by the following Office <u>US</u>) 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"));

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, 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"));

Mt Tol Inventor's Signature	6/29/2016 Date
Arthur C. Tomlin	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I James Gerard Dack ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "<u>Camera-Based Input Device</u>" ("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 ______ and given Application No. _____ by the following Office ______) this APPLICATION's Application No., filing date, and Office, when known;

was filed on June 30, 2016 and was given Application No <u>15/199,742</u> by the following Office "<u>US – United States Patent and</u> <u>Trademark Office</u>";

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

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"));

5/16 Inventor's Signature Date James Gerard Dack Printed Name in English Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT MS Docket No.: 35	59354.01
-------------------------------------	----------

I <u>Jeffrey Alan Kohler</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>Camera-Based Input Device</u>" ("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 <u>June 30, 2016</u> and given Application No. <u>15/199,742</u> by the following Office <u>US</u>) 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"));

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, 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"));

qnature Date Jeffrey Alan Kohler Printed Name in English Printed Name in Native Language (if other than English)

I <u>Eric S. Rehmever</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>Camera-Based Input Device</u>" ("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 June 30, 2016 and given Application No. 15/199,742 by the following Office US 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"));

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, 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

Eric S. Rehmeyer Printed Name in English

6-29-2016

Date

Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT

MS Docket No.: 359354.01

I <u>Edward D. Parker</u> ("ASSICNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "<u>Camera-Based Input Device</u>" ("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 _______ and given Application No. _______ by
 the following Office _______) this
 APPLICATION's Application No., filing date, and Office, when known;

🕺 was filed on June 30, 2016 and was given Application No

<u>15/199.742</u> by the following Office "<u>US - United States Patent and</u> Trademark 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.		Office
	142	

Page 1 of 2

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).

Jun 27, 9, 2006 Oate Inventor's Signature Edward D. Parker Printed Name in English Printed Name in Native Language (if other than English)

Page 2 of 2

PATENT REEL: 050295 FRAME: 0640

RECORDED: 09/05/2019