### 06/19/2017 504419077

## PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
HUA WANG	04/28/2017
JAN RAKEN	04/28/2017
RALF GROENE	06/13/2017
PANOS COSTA PANAY	05/09/2017
KARSTEN AAGAARD	04/30/2017
CASEY COOK ZELIG	04/24/2017

### **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:	29602487

### **CORRESPONDENCE DATA**

Fax Number: (202)824-3001

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using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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BANNER & WITCOFF, LTD. **Correspondent Name:** 

1100 13TH ST. NW Address Line 1:

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Address Line 4: WASHINGTON, D.C. 20005

ATTORNEY DOCKET NUMBER:	013797.13428\US
NAME OF SUBMITTER:	JOHN M. FLEMING
SIGNATURE:	/John M. Fleming/
DATE SIGNED:	06/19/2017

**PATENT** REEL: 042743 FRAME: 0463 504419077

# Total Attachments: 6 source=13428 - Executed Assignments#page1.tif source=13428 - Executed Assignments#page2.tif source=13428 - Executed Assignments#page3.tif source=13428 - Executed Assignments#page4.tif source=13428 - Executed Assignments#page5.tif

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PATENT REEL: 042743 FRAME: 0464

I, Hua Wa and/or claimed in	ing ('ASSIGNOR'), have invented subject matter ('INVENTION') disclosed a patent application entitled 'COMPUTER' ('APPLICATION'), which:
	will be filed without this executed PATENT ASSIGNMENT. ASSIGNOR hereby authorizes and requests ASSIGNEE'S legal representatives, of Banner & Witcoff, LTD., 1100 13th Street NW, Suite 1200, Washington, DC 20005-4051, who are associated with customer number 28319, to insert here in parenthesis (U.S. Serial No. 29/602487 , filed 5/1/2017 ) this APPLICATION's U.S. Serial Number and filing date, when
fooood	known;
	was filed on , and was given U.S. Serial No.
80000 80000 80000	is filed concurrently herewith;
and assigns ('ASS rights, title and into and patents derive territories, and all For good a the ASSIGNOR, to entire and exclusion APPLICATION DE ASSIGNOR and prosecution of regarding letters p	Corporation, a Washington Corporation, on behalf of itself and its successors SIGNEE'), is entitled to, and is desirous of acquiring, the entire and exclusive erest in the INVENTION and the APPLICATION (and all other applications and therefrom, such as continuing applications, in and for the United States, its foreign countries ('APPLICATION DERIVATIVES')); and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, the ve rights, title and interest in the INVENTION and the APPLICATION (and ERIVATIVES);  R agrees to execute all instruments and documents required for the making of the APPLICATION (and APPLICATION DERIVATIVES), for litigation atent derived therefrom, and for the purpose of protecting and perfecting title ON (and APPLICATION DERIVATIVES).
4/28/20	old $large$
JATÉ /	Hua Wang

and/or claimed in	a patent application e will be filed without the ASSIGNOR hereby a representatives, of B Washington, DC 200 28319, to insert here	entitled 'COMPUTER' this executed PATENT authorizes and reques lanner & Witcoff, LTD. 005-4051, who are ass in parenthesis (U.S.	natter ('INVENTION') disclosed ('APPLICATION'), which: 'ASSIGNMENT. sts ASSIGNEE'S legal ., 1100 13th Street NW, Suite ociated with customer number Serial No. 29/602487., filed erial Number and filing date, w	1200 r
2000	was filed on , and wa	as given U.S. Serial N	0.	
	is filed concurrently h	nerewith;		
and assigns ('ASS rights, title and into and patents derive territories, and all the ASSIGNOR, It entire and exclusive ASSIGNOI and prosecution or regarding letters p	SIGNEE'), is entitled to erest in the INVENTIC ed therefrom, such as foreign countries ('AP and valuable consider ne ASSIGNOR hereby re rights, title and inte ERIVATIVES); R agrees to execute a f the APPLICATION (	o, and is desirous of a DN and the APPLICAT continuing application PLICATION DERIVATION, the receipt of water in the INVENTION Dand APPLICATION Dom, and for the purposession and for the purposession.	behalf of itself and its success cquiring, the entire and exclus FION (and all other application as, in and for the United States TIVES')); hich is hereby acknowledged the ansfers to the ASSIGNEE, the N and the APPLICATION (and cuments required for the making ERIVATIVES), for litigation are of protecting and perfecting	ive s s, its by I
DATE /		Jan Rake	3N	
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I, Ralf Gro and/or claimed in	ene ('ASSIGNOR'), have invented subject matter ('INVENTION') disclosed a patent application entitled 'COMPUTER' ('APPLICATION'), which:
ANALYS .	will be filed without this executed PATENT ASSIGNMENT.
Second	ASSIGNOR hereby authorizes and requests ASSIGNEE'S legal representatives, of Banner & Witcoff, LTD., 1100 13th Street NW, Suite 1200, Washington, DC 20005-4051, who are associated with customer number 28319, to insert here in parenthesis (U.S. Serial No_29/602487, filed $\frac{5/1/2017}{}$ ) this APPLICATION's U.S. Serial Number and filing date, when known;
	was filed on , and was given U.S. Serial No.
	is filed concurrently herewith;
and assigns ('ASt rights, title and int and patents derive	Corporation, a Washington Corporation, on behalf of itself and its successors SIGNEE'), is entitled to, and is desirous of acquiring, the entire and exclusive erest in the INVENTION and the APPLICATION (and all other applications ad therefrom, such as continuing applications, in and for the United States, its foreign countries ('APPLICATION DERIVATIVES'));
the ASSIGNOR, t	and valuable consideration, the receipt of which is hereby acknowledged by he ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, the verights, title and interest in the INVENTION and the APPLICATION (and ERIVATIVES);
and prosecution or regarding letters p	R agrees to execute all instruments and documents required for the making of the APPLICATION (and APPLICATION DERIVATIVES), for litigation patent derived therefrom, and for the purpose of protecting and perfecting title ON (and APPLICATION DERIVATIVES).
613	17 ( lh
UAIL	` Ralf Groene

PATENT REEL: 042743 FRAME: 0467

disclosed and/or cl	osta Panay ('ASSIGNOR'), have invented subject matter ('INVENTION') aimed in a patent application entitled 'COMPUTER' ('APPLICATION'), which: will be filed without this executed PATENT ASSIGNMENT. ASSIGNOR hereby authorizes and requests ASSIGNEE'S legal representatives, of Banner & Witcoff, LTD., 1100 13th Street NW, Suite 1200, Washington, DC 20005-4051, who are associated with customer number 28319, to insert here in parenthesis (U.S. Serial No. $29/602487$ , filed $5/1/2017$ ) this APPLICATION's U.S. Serial Number and filing date, when known; was filed on , and was given U.S. Serial No.
9	is filed concurrently herewith;
and assigns ('ASS rights, title and inte and patents derive	orporation, a Washington Corporation, on behalf of itself and its successors IGNEE'), is entitled to, and is desirous of acquiring, the entire and exclusive rest in the INVENTION and the APPLICATION (and all other applications d therefrom, such as continuing applications, in and for the United States, its oreign countries ('APPLICATION DERIVATIVES'));
the ASSIGNOR, th	nd valuable consideration, the receipt of which is hereby acknowledged by e ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, the e rights, title and interest in the INVENTION and the APPLICATION (and RIVATIVES);
ASSIGNOF and prosecution of regarding letters pa	R agrees to execute all instruments and documents required for the making the APPLICATION (and APPLICATION DERIVATIVES), for litigation atent derived therefrom, and for the purpose of protecting and perfecting title DN (and APPLICATION DERIVATIVES).
may 9,3	3017
DATE	Panod Costa Panay

I, Karsten Aag disclosed and/or clain	aard ('ASSIGNOR'), have invented subject matter ('INVENTION') sed in a patent application entitled 'COMPUTER' ('APPLICATION'), which:
TXI will	be filed without this executed PATENT ASSIGNMENT.
	SIGNOR hereby authorizes and requests ASSIGNEE'S legal
180	resentatives, of Banner & Witcoff, LTD., 1100 13th Street NW, Suite 1200,
Wa	shington, DC 20005-4051, who are associated with customer number
283	19, to insert here in parenthesis (U.S. Serial No_29/602487, filed
5/	1/2017 ) this APPLICATION's U.S. Serial Number and filing date, when
	wn:
m	mi i i i i i i i i i i i i i i i i i i
LJ was	ifiled on , and was given U.S. Serial No.
П в	ed concurrently herewith;
LI ta ti	ed Concurating Instanti.
and assigns (ASSIGN rights, title and interes and patents derived the	oration, a Washington Corporation, on behalf of itself and its successors IEE'), is entitled to, and is desirous of acquiring, the entire and exclusive t in the INVENTION and the APPLICATION (and all other applications erefrom, such as continuing applications, in and for the United States, its gn countries ('APPLICATION DERIVATIVES'));
For good and v	aluable consideration, the receipt of which is hereby acknowledged by
the ASSIGNOR, the A	SSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, the
entire and exclusive ri	phts, title and interest in the INVENTION and the APPLICATION (and
APPLICATION DERIV	ATIVES);
ASSIGNOR ag	rees to execute all instruments and documents required for the making
and prosecution of the	APPLICATION (and APPLICATION DERIVATIVES), for litigation
regarding letters pater	t derived therefrom, and for the purpose of protecting and perfecting title
to the APPLICATION (	and APPLICATION DERIVATIVES)
04/30/2017	<b>77.</b>
DATE	Karsten Aagaard

I, Casey Cook Zelig ('ASSIGNOR'), have invented subject matter ('INVENTION') disclosed and/or claimed in a patent application entitled 'COMPUTER' ('APPLICATION'), which
will be filed without this executed PATENT ASSIGNMENT.
ASSIGNOR hereby authorizes and requests ASSIGNEE'S legal representatives, of Banner & Witcoff, LTD., 1100 13th Street NW, Suite 120 Washington, DC 20005-4051, who are associated with customer number 28319, to insert here in parenthesis (U.S. Serial No. 29/602487 , filed 5/1/2017 ) this APPLICATION's U.S. Serial Number and filing date, when known;
was filed on , and was given U.S. Serial No.
is filed concurrently herewith;
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'));
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, the 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).
4-24-2017 lesey loop Jelia
DATE Casey Cook Zelig

PATENT REEL: 042743 FRAME: 0470

**RECORDED: 06/19/2017**