### 504398439 06/05/2017

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4445136

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
MINGSHI WANG	09/22/2014
LUHUI HU	12/16/2013
LIYUAN ZHANG	12/16/2013
RAHUL POTHARAJU	03/11/2014
VITALY VOLOSHIN	12/17/2013
JOSEPH K.W. CHAN	09/23/2014
NAVENDU JAIN	12/18/2013

### **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:	15614338

### CORRESPONDENCE DATA

**Fax Number:** (801)328-1707

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Correspondent Name: WORKMAN NYDEGGER/MICROSOFT
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ATTORNEY DOCKET NUMBER:	13768.2902.1
NAME OF SUBMITTER:	RICK D. NYDEGGER
SIGNATURE:	/Rick D. Nydegger 28651/
DATE SIGNED:	06/05/2017

PATENT REEL: 042603 FRAME: 0249

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PATENT REEL: 042603 FRAME: 0250

inventor of	subject matter ( ntitled "BUILDING F	"INVENTION") discl	osed and/or c	or an original joint laimed in a patent GE-BASED MATCHING"
	ASSIGNEE'S legal Department, Micr Washington 9805 here in parenth Application No	ASSIGNOR hereby representatives, of to soft Corporation, (2) (ASSIGNEE'S LEGA eses (filed on).	he Law and Cor One Microsoft W L REPRESENTATI by the ) this A	rporate Affairs (ay, Redmond, VES), to insert and given e_ following
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PATENT REEL: 042603 FRAME: 0251

MS Docket No.: <u>340301.01</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 in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

uest-	09/22/14
Inventor's Signature	Date
Mingshi Wang	王明时
Printed Name in English	Printed Name in Native Language (if other than English)

I <u>Luhui Hu</u> ("ASSIGNOR") subject matter ("INVENTION") d "BUILDING FEATURES AND INDEXI which:	isclosed and/or claimed in	
ASSIGNEE'S legal Department, Micro Washington 9805 here in parenth Application No Office	ASSIGNOR hereby auth representatives, of the Law osoft Corporation, One Mi 2 (ASSIGNEE'S LEGAL REPReses (filed on	v and Corporate Affairs crosoft Way, Redmond, ESENTATIVES), to insert and given by the following ) this APPLICATION's
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Microsoft Corporation, successors and assigns ("ASSIGE entire 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
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Application No.	Filing Date 5 June 2017	Office USPTO

Page 1 of 2

PATENT REEL: 042603 FRAME: 0253

MS Docket No.: 340301.01

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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 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).

Date

Inventor's Signature

Luhui Hu

Printed Name in English Printed Name in Native Language (if other than English)

# PATENT ASSIGNMENT MS Docket No.: 340301.01

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Liyuan Zhang ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patapplication entitled "BUILDING FEATURES AND INDEXING FOR KNOWLEDGE-BASED MATCHI ("APPLICATION"), which:	ent
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 and given Application No by the following Office) this APPLICATION's Application No., filing date, and Office, when known;	
was filed on $\frac{12/14/2013}{}$ and was given Application  No $\frac{14/106762}{}$ by the following Office  "United States";	
Microsoft Corporation, a Washington Corporation, on behalf of itself and successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, entire and exclusive rights, title and interest in the INVENTION and the APPLICATI (and all other applications and patents derived therefrom, such as continu applications, in and for the United States, its territories, and all foreign counti ("APPLICATION DERIVATIVES"));	the ON ing
ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEG REPRESENTATIVES to insert the Application No., filing date, and Office into following table for any APPLICATION DERIVATIVES after they are known;	GAL the
Application No. Filing Date Office	
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Page I of 2

MS Docket No.: <u>340301.01</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

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Liyuan Zhang
Printed Name in English

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2013.12.16

Printed Name in Native Language (if other than English)

	PATENT	ASSIGNMENT	MS Docket No.: <u>340301.01</u>
inventor of	subject matter on the state of	("INVENTION") disclosed	inventor or an original joint and/or claimed in a patent KNOWLEDGE-BASED MATCHING"
	ASSIGNEE'S legal Department, Micr Washington 9805 here in parenth Application No	ASSIGNOR hereby authorepresentatives, of the Lawosoft Corporation, One M 2 (ASSIGNEE'S LEGAL REPRESES (filed on	w and Corporate Affairs icrosoft Way, Redmond, RESENTATIVES), to insert and given by the following ) this APPLICATION's
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**PATENT** REEL: 042603 FRAME: 0257

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

Rohy!	03/11/2014
Inventor's Signature	Date
Rahul Potharaju	
Printed Name in English	Printed Name in Native Language
	(if other than English)

I <u>Vitaly Voloshin</u> ("ASS inventor of subject matter (application entitled "BUILDING For ("APPLICATION"), which:	("INVENTION") disclosed	•
ASSIGNEE'S legal Department, Micr Washington 9805 here in parenth Application No	ASSIGNOR hereby authorepresentatives, of the Lawosoft Corporation, One M 2 (ASSIGNEE'S LEGAL REPRESES (filed on	w and Corporate Affairs icrosoft Way, Redmond, RESENTATIVES), to insert and given by the following ) this APPLICATION's
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Microsoft Corporation, successors and assigns ("ASSIGE entire 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 erefrom, such as continuing
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PATENT REEL: 042603 FRAME: 0259

MS Docket No.: <u>340301.01</u>

MS Docket No.: <u>340301.01</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

Vitaly Voloshin

Printed Name in English

Date

Printed Name in Native Language

(if other than English)

MS Docket No.: 340301.01 I Joseph K.W. Chan ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "BUILDING FEATURES AND INDEXING FOR KNOWLEDGE-BASED MATCHING" ("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 \_\_\_\_\_\_ and given Application by No. the following Office ) this APPLICATION's Application No., filing date, and Office, when known;

> $\boxtimes$  was filed on 12/14/2013 and was given Application No 14/106762 \_ by the following Office " United States

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:

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

	9/23/2014
Inventor's Signature	Date
Joseph K.W. Chan	
Printed Name in English	Printed Name in Native Language (if other than English)

# PATENT ASSIGNMENT MS Docket No.: 340301.01

inventor of	subject matter ( entitled "BUILDING F	"INVENTION") disclosed	inventor or an original joint and/or claimed in a patent .KNOWLEDGE-BASED MATCHING"
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Page 1 of 2

PATENT ASSIGNMENT	MS Docket No.:	<u>340301.01</u>
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Namente Jen'n Inventor's Signature	12/18/2013 Date
Navendu Jain	
Printed Name in English	Printed Name in Native Language (if other than English)