

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4445136

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
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
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MICROSOFT CORPORATION
<b>Street Address:</b>	ONE MICROSOFT WAY
<b>City:</b>	REDMOND
<b>State/Country:</b>	WASHINGTON
<b>Postal Code:</b>	98052
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15614338
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(801)328-1707
<i>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.</i>	
<b>Phone:</b>	8015339800
<b>Email:</b>	usdocket@microsoft.com,jescamilla@wnlaw.com
<b>Correspondent Name:</b>	WORKMAN NYDEGGER/MICROSOFT
<b>Address Line 1:</b>	60 E. SOUTH TEMPLE, SUITE 1000
<b>Address Line 4:</b>	SALT LAKE CITY, UTAH 84111
<b>ATTORNEY DOCKET NUMBER:</b>	13768.2902.1
<b>NAME OF SUBMITTER:</b>	RICK D. NYDEGGER
<b>SIGNATURE:</b>	/Rick D. Nydegger 28651/
<b>DATE SIGNED:</b>	06/05/2017

**Total Attachments: 14**

source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page1.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page2.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page3.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page4.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page5.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page6.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page7.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page8.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page9.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page10.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page11.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page12.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page13.tif  
source=13768-2902-1-2017-06-05-Assignment-inventors-to-MS (1)#page14.tif

I Mingshi Wang ("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 No. \_\_\_\_\_ by the following Office \_\_\_\_\_) this APPLICATION's Application No., filing date, and Office, when known;

☒ 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"));

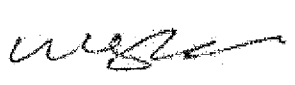
ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office
15614338	5 June 2017	USPTO

--	--	--

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).

	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 Luhui Hu ("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 No. \_\_\_\_\_ by the following Office \_\_\_\_\_) this APPLICATION's Application No., filing date, and Office, when known;

☒ was filed on December 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;

Application No.	Filing Date	Office
15614338	5 June 2017	USPTO

--	--	--

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).

	<u>12/16/2013</u>
Inventor's Signature	Date
<u>Luhui Hu</u>	<u>胡鲁辉</u>
Printed Name in English	Printed Name in Native Language (if other than English)

I Liyuan Zhang ("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 No. \_\_\_\_\_ by the following Office \_\_\_\_\_) this APPLICATION's Application No., filing date, and Office, when known;

☒ 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;

Application No.	Filing Date	Office
15614338	5 June 2017	USPTO

--	--	--

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).

	<u>2013.12.16</u>
Inventor's Signature	Date
<u>Liyuan Zhang</u>	<u>章力源</u>
Printed Name in English	Printed Name in Native Language (if other than English)



I Rahul Potharaju ("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 No. \_\_\_\_\_ by the following Office \_\_\_\_\_) this APPLICATION's Application No., filing date, and Office, when known;

☒ 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"));

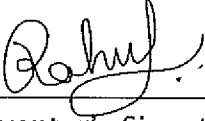
ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office
15614338	5 June 2017	USPTO

--	--	--

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).

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

I Vitaly Voloshin ("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 No. \_\_\_\_\_ by the following Office \_\_\_\_\_) this APPLICATION's Application No., filing date, and Office, when known;

☒ 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"));

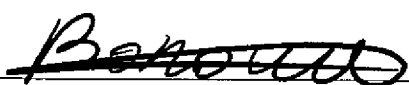
ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office
15614338	5 June 2017	USPTO

--	--	--

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).

	<u>12/17/2013</u>
Inventor's Signature	Date
<u>Vitaly Voloshin</u>	
Printed Name in English	Printed Name in Native Language (if other than English)

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 No. \_\_\_\_\_ by the following Office \_\_\_\_\_) this APPLICATION's Application No., filing date, and Office, when known;

☒ 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;

Application No.	Filing Date	Office
15614338	5 June 2017	USPTO

--	--	--

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).

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

I Navendu Jain ("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 No. \_\_\_\_\_ by the following Office \_\_\_\_\_) this APPLICATION's Application No., filing date, and Office, when known;

☒ 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;

Application No.	Filing Date	Office
15614338	5 June 2017	USPTO

--	--	--

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).

	<u>12/18/2013</u>
Inventor's Signature	Date
<u>Navendu Jain</u>	
Printed Name in English	Printed Name in Native Language (If other than English)