502276461 03/18/2013

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
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| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------------|----------------|
| Feng Zhao | 02/22/2013 |
| Niels Brouwers | 02/05/2013 |
| Nicholas D. Lane | 01/24/2013 |
| Chieh-Jan Mike Liang | 01/24/2013 |
| Ranveer Chandra | 03/14/2013 |

RECEIVING PARTY DATA

| Name: | Microsoft Corporation |
|-----------------|-----------------------|
| Street Address: | One Microsoft Way |
| City: | Redmond |
| State/Country: | WASHINGTON |
| Postal Code: | 98052-6399 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13845449 |

CORRESPONDENCE DATA

Fax Number: 5093238979

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 5099444776

Email: cherri@leehayes.com
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Address Line 1: 601 W Riverside
Address Line 2: Suite 1400

Address Line 4: Spokane, WASHINGTON 99201

| NAME OF SUBMITTER: Cherri A. Simon | NAME OF SUBMITTER: | Cherri A. Simon | |
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REEL: 030036 FRAME: 0280

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PATENT REEL: 030036 FRAME: 0281

| PATENT | ASSIGNMENT MS D | ocket No.: | 337970.01 |
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| | Attorney E | locket No.: | MS1-5345US |
| Feng Zh | 90 (*ASSI) | GNOR") am 1 | the original inventor |
| or an original joint inventor of | subject matter ("INVENT | ION") disclo | sed and/or claimed |
| in a patent application entitled | | | |
| APPL | ICATION TESTING AND ANA | LYSIS | |
| ("APPLICATION"), which: | | | |
| will be filed. | ASSIGNOR hereby aut | horizes, ar | nd requests, |
| ASSIGNEE'S legal | representatives, of the L | aw and Corp | oorate Affairs |
| Department, Micr | osoft Corporation, One M | Aicrosoft Wa | ıy, Redmond, |
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| successors and assigns ("ASSI | | | |
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PATENT ASSIGNMENT MS Docket No.: 337970.01

Attorney Docket No.: MS1-5345US

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);

| \ | 2/22/2013 |
|-------------------------|---------------------------------|
| Inventor's Signature | Date |
| Feng Zhao | |
| Printed Name in English | Printed Name in Native Language |
| | (if other than English) |

| | PATENT | ASSIGNMENT | MS Do | cket No.: | 337970.01 |
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| | | At | torney Do | ocket No.: | MS1-5345US |
| Ĭ | Niels Brou | | • | | he original inventor |
| or an origin | | | | | sed and/or claimed |
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| | States Patent | and Trademark | Office) | this Al | PPLICATION's |
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| Micro | soft Corporation, | a Washington Co | orporatio | n, on beha | alf of itself and its |
| successors a | and assigns ("ASSI | GNEE"), is entitled | d to, and | is desirou | is of acquiring, the |
| entire and e | xclusive rights, tit | le and interest ir | the INV | ENTION an | d the APPLICATION |
| (and all ot | her applications | and patents de | rived the | refrom, s | uch as continuing |
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PATENT REEL: 030036 FRAME: 0284 PATENT ASSIGNMENT

MS Docket No.:

337970.01

Attorney Docket No.: MS1-5345US

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);

| | 514 Feb. 2013 |
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| Inventor's Signature | Date |
| Niels Brouwers | |
| Printed Name in English | Printed Name in Native Language |
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| | PATENT | ASSIGNMENT | MS Docket No.: | 337970.01 |
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| | | At | torney Docket No.: | MS1- 5345US |
| 1 | Nicholas D | Lane | ("ASSIGNOR") am | the original inventor |
| or an origi | | | | losed and/or claimed |
| in a patent | application entitled | | | |
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| ("APPLICAT | 10N"), which: | <u></u> | | |
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| | ASSIGNEE'S legal | representatives, | of the Law and Co | rporate Affairs |
| | Department, Micr | osoft Corporation | 1, One Microsoft V | Vay, Redmond, |
| | Washington 9805 | 2 (ASSIGNEE'S LE | GAL REPRESENTAT | IVES), to insert |
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| PATENT ASSIGNMENT | MS Docket No.: | 337970.01 |
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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);

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| Nicholes D. Lane | • | | × |
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| PATENT | ASSIGNMENT MS D | ocket No.: | 337970.01 |
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| | Attorney De | ocket No.: | MS1- 5345US |
| Chieh-Jan Mil | ce Llang ("ASSIG | NOR") am th | ne original inventor |
| or an original joint inventor of | subject matter ("INVENTI | ON") disclos | sed and/or claimed |
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| Microsoft Corporation, a Washington Corporation, on behalf of itself and its | | | |
| successors and assigns ("ASSI | GNEE"), is entitled to, and | l is desirou | s of acquiring, the |
| entire and exclusive rights, tit | le and interest in the INV | ENTION and | the APPLICATION |
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PATENT ASSIGNMENT MS Docket No.: 337970.01

Attorney Docket No.: MS1-5345US

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);

| Inventor's Signature | _೩೮)%/ <i>೦(/ ೩</i> ೪ Date |
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| Chieh-Jan Mike Liang | |
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| | At | torney Docket | No.: | MS1- 5345US |
| Ranveer Cha | | • | | ne original inventor |
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| | by the following Office " <u>US - United States Patent</u> | | | |
| <u>and Trademark Office</u>)"; Microsoft Corporation, a Washington Corporation, on behalf of itself and its | | | | |
| successors and assigns ("ASSIG | | • | | |
| entire and exclusive rights, title | | | | |
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| applications, in and for the United States, its territories, and all foreign countries | | | | |
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| Jam Mon | 03/14/2013 |
|-------------------------|---------------------------------|
| Inventor's Signature | Date |
| Ranveer Chandra | |
| Printed Name in English | Printed Name in Native Language |
| | (if other than English) |