504435926 06/28/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4482627

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

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------------|----------------|
| ANATOLY V. GRABAR | 04/04/2017 |
| HOWARD J. DICKERMAN | 03/31/2017 |
| VENKATA S. IRAVA | 03/31/2017 |
| JOSHUA J. BURKHOLDER | 06/27/2017 |

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: | 15476563 |

CORRESPONDENCE DATA

Fax Number:

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.

Email: usdocket@microsoft.com

Correspondent Name: SCHWEGMAN LUNDBERG & WOESSNER, P.A.

Address Line 1: P.O. BOX 2938

Address Line 4: MINNEAPOLIS, MINNESOTA 55402

| ATTORNEY DOCKET NUMBER: | 401692-US-NP (1777.062US1 | |
|-------------------------|---------------------------|--|
| NAME OF SUBMITTER: | MEGAN L. REED | |
| SIGNATURE: | /Megan L. Reed/ | |
| DATE SIGNED: | 06/28/2017 | |

Total Attachments: 9

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PATENT 504435926 REEL: 042852 FRAME: 0485

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PATENT REEL: 042852 FRAME: 0486

RECORDATION FORM COVER SHEET PATENTS ONLY

Atty Ref/Docket No.: 401692-US-NP (1777.062US1) Patent and Trademark Office To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof. 2. Name and address of receiving party(ies): 1. Name of conveying party(ies): Name: Microsoft Technology Licensing, LLC Anatoly V. Grabar, Howard J. Dickerman, Venkata S. Irava, Joshua J. Burkholder Street Address: One Microsoft Way City: <u>Redmond</u> State: <u>WA</u> Zip Country: <u>United States of America</u> Additional name(s) of conveying party(ies) attached? Zip: 98052 []Yes [X]No Additional name(s) & address(es) attached? []Yes 3. Nature of conveyance: [X]No [X] Assignment [] Merger [] Security Agreement [] Change of Name [] Other Execution Date: <u>April 4, 2017, March 31, 2017, March 31, 2017, June 27, 2017</u> 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s) B. Patent No.(s) Serial No. 15/476,563 Additional numbers attached? []Yes [X]No 6. Total number of applications and patents involved: 1 5. Name and address of party to whom correspondence concerning document should be mailed: 7. Total fee (37 CFR 3.41):\$ <u>0.00</u> Name: Robert M. Hirning []Enclosed [Authorized to be charged to deposit account Address: 19-0743 Schwegman Lundberg & Woessner, P.A. P.O. Box 2938 8. Please charge any additional fees or credit any over Minneapolis, MN 55402--0938 payments to our Deposit Account No.: 19-0743 DO NOT USE THIS SPACE Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks Mail Stop Assignment Recordation Services P.O. Box 1450 Alexandria, VA 22313-1450

Robert M. Hirning/Reg. No. 59,215

Name of Person Signing

PATENT REEL: 042852 FRAME: 0487

Total number of pages including cover sheet: 9

| inventor of application | subject matter (entitled <u>"ADDRI</u> | ("INVENTION") disc | original inventor or an losed and/or claimed <u>TING FOR LEGACY</u> | in a patent |
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| COMPATIBIL | <u>IIY</u> , WNICN: | | | |
| | LLC, One Microso LEGAL REPRESEN on the following (| representative, Mi ft Way, Redmond, \ TATIVES), to inser and given App Office | y authorizes, and recrosoft Technology Lice Vashington 98052 (ASSI t here in parentheses olication No date, and Office, when | ensing, GNEE'S (filed by) this |
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| behalf of its of acquiring priority, in the derived ther | If and its successo, the entire and e he INVENTION and efrom, such as cor | rs and assigns ("AS! xclusive rights, title the APPLICATION (a atinuing application | shington limited liability SIGNEE"), is entitled to, a e and interest, including and all other application is, in whole or in part, i ies ("APPLICATION DERI | nd is desirous g the right of is and patents in and for the |
| to insert the | | filing date, and O | ASSIGNEE'S LEGAL REPI fice into the following | |
| Application | No. | Filing Date | Office | |
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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, 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 \$ Signature

Anatoly V. Grabar

Printed Name in English

4/4/2017

vale ** . . #****/**//

Printed Name in Native Language (if other than English)

Page 2 of 2

| I How | ard J. Dickerman ("A | ASSIGNOR") am the origina | l inventor or an original joint |
|---------------|-------------------------|-----------------------------------|---------------------------------|
| inventor of | subject matter ("I | INVENTION") disclosed a | nd/or claimed in a patent |
| application | entitled "ADDRES | S SPACE SPLITTING F | OR LEGACY APPLICATION |
| COMPATIBILI | <u>TY</u> ", which: | | |
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| | will be filed. | ASSIGNOR hereby autho | rizes, and requests, |
| | ASSIGNEE'S legal r | epresentative, Microsoft | Technology Licensing, |
| | LLC, One Microsoft | : Way, Redmond, Washingt | on 98052 (ASSIGNEE'S |
| | LEGAL REPRESENT | ATIVES), to insert here | in parentheses (filed |
| | on | and given Application | |
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| | APPLICATION's App | olication No., filing date, ar | nd Office, when known; |
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| \bowtie | was filed on March | 31, 2017 and was given A | Application No |
| | 15/476,563 by the | following Office " <u>US Pate</u> | nt Office "; |
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| | <u> </u> | | limited liability company, on |
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| United States | s, its territories, and | all foreign countries ("APF | PLICATION DERIVATIVES")); |
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| APPLICATION | N DERIVATIVES after | they are known; | |
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MS Docket No.: 401692-US-NP

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")):

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| Lister Line | 3/31/2017 | |
|-------------------------|--|--|
| Inventor's Signature | Date | |
| Howard J. Dickerman | | |
| Printed Name in English | Printed Name in Native Language (if other than English) | |

| I Ven | kata S. Irava ("ASSI | GNOR") am the original | inventor or an original joint |
|--------------------|------------------------|----------------------------------|-----------------------------------|
| inventor of | subject matter (" | INVENTION") disclosed a | nd/or claimed in a patent |
| application | entitled "ADDRES | S SPACE SPLITTING F | OR LEGACY APPLICATION |
| <u>COMPATIBILI</u> | <u>TY</u> ", which: | | |
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| | | ASSIGNOR hereby author | • |
| | 9 | representative, Microsoft | 3, |
| | LLC, One Microsoft | : Way, Redmond, Washingt | ton 98052 (ASSIGNEE'S |
| | LEGAL REPRESENT | ATIVES), to insert here | in parentheses (filed |
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| | APPLICATION's App | olication No., filing date, ar | nd Office, when known; |
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| | | 31, 2017 and was given A | |
| | 15/476,563 by the | following Office " <u>US Pat</u> | tent Office_"; |
| Micro | soft Technology Lice | ensing, LLC, a Washington | limited liability company, on |
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MS Docket No.: 401692-US-NP

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|-------------------------|---------------------------------|--|
| | 03 31 2017 | |
| Inventor's Signature | Date | |
| Venkata S. Irava | VENKATA S. IRAVA | |
| Printed Name in English | Printed Name in Native Language | |
| | (if other than English) | |

PATENT ASSIGNMENT MS Docket No.: 401692-US-NP

| PATERI ADDROMANI | 7.4 | 13 DOCKCENO., 401092-03-141 |
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| inventor of subject matter (" | "INVENTION") disclosed a | l inventor or an original join ind/or claimed in a paten FOR LEGACY APPLICATION |
| ASSIGNEE'S legal LLC, One Microsof LEGAL REPRESENT on the following O APPLICATION's Ap | ASSIGNOR hereby authorepresentative, Microsoft tway, Redmond, Washing ATIVES), to insert here and given Application office plication No., filing date, a 31, 2017 and was given a following Office "United" | Technology Licensing, ton 98052 (ASSIGNEE'S in parentheses (filed Noby) this nd Office, when known; Application No |
| Trademark Office | · · | States Patent and Illinited liability company, or |
| behalf of itself and its successor of acquiring, the entire and ex priority, in the INVENTION and the derived therefrom, such as confunited States, its territories, and | s and assigns ("ASSIGNEE") clusive rights, title and ir the APPLICATION (and all o tinuing applications, in wi | , is entitled to, and is desirounterest, including the right opther applications and patent hole or in part, in and for the |
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Page 1 of 2

PATENT ASSIGNMENT

MS Docket No.: 401692-US-NP

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Joshua J. Burkholder
Printed Name in English
Printed Name in English
(/27/2017)

Printed Name in Native Language
(if other than English)