505439176 04/22/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5485977

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

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------|----------------|
| MARC SHEPARD | 04/19/2019 |
| BRAD R. ANDERSON | 04/19/2019 |
| BRETT D.A. FLEGG | 04/19/2019 |
| DAVID C. JAMES | 04/18/2019 |
| JASON R. GITHENS | 04/19/2019 |

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: | 16389909 |

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.

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 314-302-1451

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Correspondent Name: BARTA, JONES & FOLEY, P.C. **Address Line 1:** 2805 N. DALLAS PARKWAY

Address Line 2: SUITE 222

Address Line 4: PLANO, TEXAS 75093

| ATTORNEY DOCKET NUMBER: | 406129-US-NP | |
|-------------------------|-------------------------------|--|
| NAME OF SUBMITTER: | HOLLI L. TEMPLETON | |
| SIGNATURE: | /Holli L. Templeton/ | |
| DATE SIGNED: | ATE SIGNED: 04/22/2019 | |
| | | |

Total Attachments: 10

PATENT REEL: 048958 FRAME: 0486

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PATENT REEL: 048958 FRAME: 0487

PATENT ASSIGNMENT MS Docket No.: 406129-US-NP I Marc SHEPARD ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "OPTIMIZING HARDWARE REPLACEMENT USING PERFORMANCE ANALYTICS" ("APPLICATION"), which: will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representative, Microsoft Technology Licensing, LLC., One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on April 19, 2019 and given Application No. 16/389,909 by the following Office "US - United States Patent and Trademark Office": this APPLICATION's Application No., filing date, and Office, when known; was filed on ______and was given Application No _____ by the following Office "US - United States Patent and Trademark Office"; Microsoft Technology Licensing, LLC, a Washington limited liability company, 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, 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 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

MS Docket No.: 406129-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"));

| Mr And | 4/19/19 |
|-------------------------|---------------------------------|
| Inventor's Signature | Date |
| Marc SHEPARD | |
| Printed Name in English | Printed Name in Native Language |
| | (if other than English) |

I <u>Brad R. ANDERSON</u> ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "<u>OPTIMIZING HARDWARE REPLACEMENT USING PERFORMANCE ANALYTICS</u>" ("APPLICATION"), which:

MS Docket No.: 406129-US-NP

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|---|---------------------------|-------------|----------------|------------------|---------|------------------|----------------|------------|-------------|
| | ASSIGNEE'S | s legal rep | resentat | ive, Mic | rosoft | Techno | logy L | icens | ing, |
| | LLC., One I | Microsoft W | /ay, Red | mond, W | ashing | ton 98(|)52 (AS | SIGNI | EE'S |
| | LEGAL REI | PRESENTAT | IVES), t | o insert | here | in par | enthes | es (f | iled |
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| | the follow | ing Office | <u>"US ~ </u> | <u> United S</u> | tates F | atent | and Tr | adem | <u>ıark</u> |
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| | States Pate | nt and Tra | <u>demark</u> | Office"; | | | | | |

Microsoft Technology Licensing, LLC, a Washington limited liability company, 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, 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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| Hoventor's Signature | H-19-19 Date |
|-------------------------|---------------------------------|
| Brad R. ANDERSON | |
| Printed Name in English | Printed Name in Native Language |
| | (if other than English) |

MS Docket No.: 406129-US-NP I Brett D.A. FLEGG ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "OPTIMIZING HARDWARE REPLACEMENT USING PERFORMANCE ANALYTICS" ("APPLICATION"), which: will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representative, Microsoft Technology Licensing, LLC., One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on April 19, 2019 and given Application No. <u>16/389,909</u> by the following Office "US - United States Patent and Trademark Office"; this APPLICATION's Application No., filing date, and Office, when known: was filed on ______and was given Application No ______ by the following Office "US - United States Patent and Trademark Office": Microsoft Technology Licensing, LLC, a Washington limited liability company, 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, 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

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| | April 19, 2019 |
|-------------------------|---------------------------------|
| Inventor's Signature | Date |
| Brett D.A. FLEGG | |
| Printed Name in English | Printed Name in Native Language |
| | (if other than English) |

PATENT ASSIGNMENT MS Docket No.: 406129-US-NP I <u>David C. IAMES</u> ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "OPTIMIZING HARDWARE REPLACEMENT USING PERFORMANCE ANALYTICS" ("APPLICATION"), which: will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representative, Microsoft Technology Licensing, LLC., One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on April 19, 2019 and given Application No. 16/389,909 by the following Office "US - United States Patent and Trademark Office": this APPLICATION's Application No., filing date, and Office, when known: was filed on _____and was given Application No ______ by the following Office "US - United States Patent and Trademark Office": Microsoft Technology Licensing, LLC, a Washington limited liability company, 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, 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 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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| BK23 | 4-18-19 |
|-------------------------|---------------------------------|
| Inventor's Signature | Date |
| David C. JAMES | |
| Printed Name in English | Printed Name in Native Language |
| | (if other than English) |

MS Docket No.: 406129-US-NP I Jason R. GITHENS ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "OPTIMIZING HARDWARE REPLACEMENT USING PERFORMANCE ANALYTICS" ("APPLICATION"), which: will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representative, Microsoft Technology Licensing, LLC., One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on April 19, 2019 and given Application No. 16/389,909 by the following Office "US - United States Patent and Trademark Office"; this APPLICATION's Application No., filing date, and Office. when known: was filed on _____and was given Application No ______ by the following Office "US - United States Patent and Trademark Office": Microsoft Technology Licensing, LLC, a Washington limited liability company, 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, 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 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

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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).

Jason R. GITHENS
Printed Name in English

Printed Name in English

Printed Name in English)