505953057 03/05/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5999762

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

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------|----------------|
| GUANG HAO LOW | 03/04/2020 |

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: | 16810616 |

CORRESPONDENCE DATA

Fax Number: (425)936-7329

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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Email: ECDocket@microsoft.com

Correspondent Name: MICROSOFT CORPORATION

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Address Line 4: REDMOND, WASHINGTON 98052

| ATTORNEY DOCKET NUMBER: | 408101-US-NP |
|-------------------------|-----------------------|
| NAME OF SUBMITTER: | VLADIMIR A. KOZYREV |
| SIGNATURE: | /VLADIMIR A. KOZYREV/ |
| DATE SIGNED: | 03/05/2020 |

Total Attachments: 2

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PATENT 505953057 REEL: 052032 FRAME: 0310

PATENT ASSIGNMENT

MS Docket No.: 408101-US-NP

| inventor of application | subject matter (| "INVENTION") disc ZED BLOCK EN | original inventor or an origin closed and/or claimed in a CODING OF LOW-RANK FI | patent |
|--|--|--|---|---|
| | ASSIGNEE'S legal LLC, One Microso LEGAL REPRESENT March 5, 2020 the following Of | representative, M ft Way, Redmond, 'ATIVES), to insert and given Appli fice <u>US - United</u> | oy authorizes, and requests icrosoft Technology Licensing Washington 98052 (ASSIGNEE': here in parentheses (filed on ication No. 16/810,616 bactes Patent and Trademartion No., filing date, and Office | l. S .y <u>k</u> |
| | | and wa | as given Application No | |
| behalf of it desirous of right of prio patents deri for the Ur DERIVATIVE | self and its succe acquiring, the ent rity, in the INVENT ved therefrom, su- nited States, its S")); INOR hereby | essors and assign ire and exclusive i ION and the APPLI ch as continuing a territories, and authorizes, an the Application N | ashington limited liability comp s ("ASSIGNEE"), is entitled to, rights, title and interest, include CATION (and all other applicati pplications, in whole or in part all foreign countries ("APPL d requests, ASSIGNEE'S No., filing date, and Office is after they are known; | , and is ding the ions and t, in and ICATION LEGAL |
| Application | No. | Filing Date | Office | |
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MS Docket No.: 408101-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"));

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).

| HO | Ma^ 04 2020 |
|-------------------------|--|
| Inventor's Signature | Date |
| Guang Hao LOW | |
| Printed Name in English | Printed Name in Native Language (if other than English) |