506234542 09/02/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6281286

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| GUOQING LI | 08/24/2020 |
| YONG LIU | 07/24/2020 |
| JARKKO L. KNECK | 07/25/2020 |
| TIANYU WU | 07/24/2020 |
| LAWRIE KURIAN | 07/27/2020 |
| TASHBEEB HAQUE | 09/02/2020 |
| LEOR KEHATY | 07/25/2020 |
| YOEL BOGER | 07/26/2020 |
| KOBY VAINAPEL | 07/25/2020 |

RECEIVING PARTY DATA

| Name: | APPLE INC. |
|-----------------|--------------------|
| Street Address: | ONE APPLE PARK WAY |
| City: | CUPERTINO |
| State/Country: | CALIFORNIA |
| Postal Code: | 95014 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 17010626 |

CORRESPONDENCE DATA

Fax Number: (512)853-8801

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.

Phone: 5128538800

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KOWERT HOOD MUNYON RANKIN & GOETZEL **Correspondent Name:**

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Address Line 2: **BLDG 2, STE 300**

Address Line 4: **AUSTIN, UNITED STATES 78746**

| ATTORNEY DOCKET NUMBER: | 1888-83301 |
|-------------------------|-----------------|
| NAME OF SUBMITTER: | JEFFREY C. HOOD |

PAIENI

REEL: 053677 FRAME: 0905 506234542

| SIGNATURE: | /Jeffrey C. Hood/ | |
|---|-------------------|--|
| DATE SIGNED: 09/02/2020 | | |
| Total Attachments: 4 | | |
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| source=P43513US1_Assignment_090220_1888-83301#page2.tif | | |
| source=P43513US1_Assignment_090220_1888-83301#page3.tif | | |
| source=P43513US1_Assignment_090220_1888-83301#page4.tif | | |

PATENT REEL: 053677 FRAME: 0906

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned does hereby:

SELL, ASSIGN AND TRANSFER to Apple Inc. (the "Assignee"), a corporation organized and existing under and by virtue of the laws of the State of California, and having its principal place of business at One Apple Park Way, Cupertino, CA 95014, the entire right, title and interest for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent, which has been executed by the undersigned concurrently herewith, and is entitled Scalable and Reliable Multicast Protocols, such application and all regional, national, provisional, divisional, continuing, substitute, renewal, reissue, international (including international PCT applications), and all other applications for patent which have been or shall be filed internationally, in the United States and/or all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file national and foreign applications under the provisions of any convention or treaty and claim priority based on such application;

To the extent enforceable, this Assignment shall be deemed to have come into effect on the earlier of either: 1) the signature date below or 2) as of the earliest priority date of the present application, and where priority is not claimed to an earlier application, then from the filing date of the present application.

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT that, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, international and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for securing, maintaining and enforcing proper patent protection for such improvements and for vesting title to such improvements in the Assignee;

PATENT REEL: 053677 FRAME: 0907 COVENANT AND AGREE that the above is and will be binding on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assigns.

| (Signature)_ | / Guoqing Li | / | Date: 24-Aug-2020 |
|------------------------|--------------------------------------|---|-------------------|
| Name: | Guoqing Li | | |
| (Signature) _ Name: | | | Date: 24-Jul-2020 |
| | | | 25-Jul-2020 |
| (Signature) _ Name: | الملا ملامل المرار / Jarkko L. Kneck | / | Date: |
| (Signature) _ Name: | Tianyu Wu | / | Date: 24-Jul-2020 |
| (Signature) _ Name: | / Lawrie Kurian | / | Date: 27-Jul-2020 |
| | / Tashbeeb Haque | / | Date: |
| (Signature) _ Name: | Leor Kehaty | / | Date: 25-Jul-2020 |
| (Signature) _ Name: | / Yoel Boger | | Date: 26-Jul-2020 |

COVENANT AND AGREE that the above is and will be binding on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assigns.

| (Signature)_ | / | / | Date: | |
|------------------------|--------------------|---|-------|--------------|
| Name: | / Guoqing Li | | | |
| (Signature) _ Name: | / Yong Liu | / | Date: | |
| (Signature) _ Name: | / Jarkko L. Kneck | | Date: | |
| (Signature) _ Name: | / Tianyu Wu | / | Date: | |
| (Signature) _ Name: | / Lawrie Kurian | / | Date: | |
| (Signature) _ Name: | Tashbeeb Haque | / | Date: | Sept 2, 2020 |
| (Signature) _ Name: | / Leor Kehaty | / | Date: | |
| (Signature) _ Name | / Yoel Boger | / | Date: | |

| | 'AIG | | 25-Jul-2020 |
|--------------|---------------|---|-------------|
| (Signature)_ | | / | Date: |
| Name: | Koby Vainapel | | |

Customer No. 81310

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> PATENT REEL: 053677 FRAME: 0910

RECORDED: 09/02/2020