# PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT3872859

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

**CONVEYING PARTY DATA**

| Name | Execution Date |
|---|---|
| NATHANIEL C. BEGEMAN | 04/25/2016 |
| SEAN M. GIES | 04/25/2016 |
| ANDREW D. PANGBORN | 04/25/2016 |

**RECEIVING PARTY DATA**

| | |
|---|---|
| Name: | APPLE INC. |
| Street Address: | 1 INFINITE LOOP |
| City: | CUPERTINO |
| State/Country: | CALIFORNIA |
| Postal Code: | 95014 |

**PROPERTY NUMBERS Total: 1**

| Property Type | Number |
|---|---|
| Application Number: | 15154471 |

**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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|---|---|
| NAME OF SUBMITTER: | RAYHAO CHUNG |
| SIGNATURE: | /Rayhao Chung/ |
| DATE SIGNED: | 05/13/2016 |

**Total Attachments: 2**
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# ASSIGNMENT

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

SELL, ASSIGN AND TRANSFER to Apple Inc., (the "Assignee"), a corporation of California having a place of business at 1 Infinite Loop, Cupertino, California 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 entitled: **Graphics Engine And Environment For Efficient Real Time Rendering Of Graphics That Are Not Pre-Known**, which was filed as indicated below (the below-signed Assignors hereby grant the Assignee's designated agent to fill in this information after their signatures are applied):

☐ is to be filed herewith;

☒ was filed on <u>May 13, 2016</u>, now bearing U.S. Serial Number 15/154,471

and all divisional, continuing, continuation-in-part, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and 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 foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;
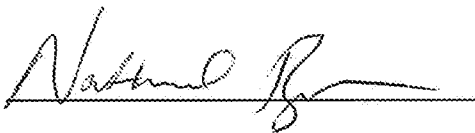
WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;
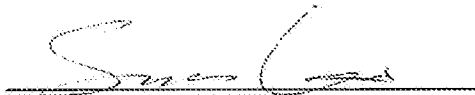
COVENANT that, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, continuation-in-part, substitute, renewal, reissue and all other patent applications on any and all such improvements; 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;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

Executed on    4-25-2016    by    _____

Date                        Nathaniel C. Begeman

Executed on    4-25-2016    by    _____

Date                        Sean M. Gies

Executed on    4-25-2016    by    _____

Date                        Andrew D. Pangborn

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