PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KELVIN C. CHIU	06/02/2017
CHARLES BRISSART	06/08/2017
GOKHAN AVKAROGULLARI	03/25/2018
LLOYD A. CUNNINGHAM	05/18/2018
RAHUL U. JOSHI	03/28/2018

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:	15989404

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.

Phone: 713-228-6601

Email: mbrininger@blankrome.com

Correspondent Name: APPLE - BLANK ROME C/O BLANK ROME LLP

Address Line 1: 717 TEXAS AVENUE, SUITE 1400

Address Line 4: HOUSTON, TEXAS 77002

ATTORNEY DOCKET NUMBER: P34715US1 (119-1336US1)	
NAME OF SUBMITTER:	RAYHAO CHUNG
SIGNATURE:	/Rayhao Chung/
DATE SIGNED:	05/25/2018

Total Attachments: 6

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PATENT REEL: 045901 FRAME: 0854

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PATENT REEL: 045901 FRAME: 0855

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 One Apple Park Way, 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: Compound Shader Object and Use Thereof, 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 h	erewith;	
\boxtimes	was filed on _	May 25, 2018	, now bearing U.S. Serial Number
	15/989,404	······································	

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.

Executed on	6/2/2017 Date	by	Kelvin C. Chiu
Executed on	·	bÿ	
Executed on	Date	by	Charles Brissart
·	Date		Gokhan Avkaroguliari
Executed on	Date	by	Lloyd A. Cunningham

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.

Executed on		bγ		
	Date		Kelvin C. Chiu	
Executed on	<u>6/08/2017</u> Date	by	Charles Brissart	
Executed on		by	Gokhan Avkarogullari	
Executed on	Date	by	Llovd A. Cunningham	

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Executed on	Date	by	Kelvin C. Chiu
Executed on	Date	by	Charles Brissart
Executed on	3/29/18 Date	by	Gokhan Avkarogullari
Executed on	 Date	iby.	Lloyd A. Cunningham

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

Executed on		by	
	Date	Kelvin C. Chiu	
Executed on		by	
	Date	Charles Brissart	
Executed on		by	
	Date	Gokhan Avkarogulla	
		floyd Conings	en.
Executed on	May 18, 2018	floyd Chings	
	Date	Lloyd A. Cunningha	m

Executed on

3/28/2018

Date

by

Rahul U. Joshi

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