

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5473063

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CALVIN YUE-REN KUO	09/16/2016
WILLIAM ALEXANDER STEVENSON	09/19/2016
JAMES CHRISTOPHER SORENSON III	09/16/2016
SHYAM KRISHNAMOORTHY	09/19/2016
JONATHAN I. TUROW	09/16/2016
MARK EDWARD RAFN	09/16/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	AMAZON TECHNOLOGIES, INC.
<b>Street Address:</b>	PO BOX 81226
<b>City:</b>	SEATTLE
<b>State/Country:</b>	WASHINGTON
<b>Postal Code:</b>	98108-1226
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16383466
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(801)566-0750
<i>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.</i>	
<b>Phone:</b>	8015666633
<b>Email:</b>	jennifer.morison@tnw.com, docket@tnw.com
<b>Correspondent Name:</b>	THORPE, NORTH & WESTERN - AMAZON
<b>Address Line 1:</b>	8180 SOUTH 700 EAST SUITE 350
<b>Address Line 4:</b>	SANDY, UTAH 84070
<b>ATTORNEY DOCKET NUMBER:</b>	3516-P33327.US02CON
<b>NAME OF SUBMITTER:</b>	STEVE M. PERRY
<b>SIGNATURE:</b>	/Steve M. Perry/
<b>DATE SIGNED:</b>	04/12/2019
This document serves as an Oath/Declaration (37 CFR 1.63).	

**Total Attachments: 9**

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**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. \_\_\_\_\_

Attorney Docket No. 3516-P33327.US

Filing Date \_\_\_\_\_

Client Docket No. P33327-US

**PARTIES TO THE ASSIGNMENT**

Assignor(s):

**Calvin Yue-Ren Kuo**  
410 Terry Avenue North  
Seattle, WA 98109-5210

**Shyam Krishnamoorthy**  
410 Terry Avenue North  
Seattle, WA 98109-5210

**William Alexander Stevenson**  
410 Terry Avenue North  
Seattle, WA 98109-5210

**Jonathan I. Turow**  
410 Terry Avenue North  
Seattle, WA 98109-5210

**James Christopher Sorenson III**  
410 Terry Avenue North  
Seattle, WA 98109-5210

**Mark Edward Rafn**  
410 Terry Avenue North  
Seattle, WA 98109-5210

Assignee:

Amazon Technologies, Inc.  
PO Box 81226  
Seattle, WA 98108-1226

**AGREEMENT**

WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled  
“AGGREGATED GROUP STATE FOR A GROUP OF DEVICE REPRESENTATIONS” (Invention) for which  
a non-provisional application for United States Letters Patent (Application):

- was filed on \_\_\_\_\_ and accorded U.S. Application No. \_\_\_\_\_; or
- will be filed concurrently with the submission of this executed PATENT ASSIGNMENT  
for recordation.

ASSIGNOR(S) hereby authorizes and requests ASSIGNEE’S legal representatives, of  
AGGREGATED GROUP STATE FOR A GROUP OF DEVICE REPRESENTATIONS, associated with  
Customer No. 136639, to insert in the header above and here in parentheses (U.S. Patent  
Application No. \_\_\_\_\_, filed \_\_\_\_\_) this application’s U.S. application number and  
filing date, when known.

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U.S. Patent Appln. No. \_\_\_\_\_

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Client Docket No. P33327-US

Title of Invention: AGGREGATED GROUP STATE FOR A GROUP OF DEVICE REPRESENTATIONS

Inventors: **Calvin Yue-Ren Kuo, William Alexander Stevenson, James Christopher Sorenson III, Shyam Krishnamoorthy, Jonathan I. Turow, Mark Edward Rafn**

WHEREAS, ASSIGNEE, a corporation of the State of Nevada, is desirous of acquiring the entire right, title and interest in and to the Invention and in and to any letters patent that may be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto ASSIGNEE its successors and assigns, the entire right, title and interest in and to said Invention and any improvements thereto, said Application and any and all letters patent which may be granted for said Invention in the United States of America and its territorial possessions and in any and all foreign countries, and in any and all provisional, divisions, reissues, re-examinations and continuations thereof, including the right to file foreign applications directly in the name of ASSIGNEE and to claim priority rights deriving from said Application to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said Invention, Application and all letters patent on said Invention to be held and enjoyed by ASSIGNEE and its successors and assigns for their use and benefit and of their successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNOR(S) had this assignment, transfer and sale not been made. ASSIGNOR(S) hereby authorize and request the Commissioner of Patents and Trademarks, as well as all other applicable patent offices throughout the world, to issue all letters patent on said Invention to ASSIGNEE. ASSIGNOR(S) agree to execute all instruments and documents required for the making and prosecution of applications for United States and foreign letters patent on said Invention, for litigation

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Inventors: **Calvin Yue-Ren Kuo, William Alexander Stevenson, James Christopher Sorenson III, Shyam Krishnamoorthy, Jonathan I. Turow, Mark Edward Rafn**

regarding said letters patent, or for the purpose of protecting title to said Invention or letters patent therefor.

AND ASSIGNOR(S) DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of said letters patent before or after issuance.

AND ASSIGNOR(S) DOES HEREBY covenant and agree that ASSIGNOR(S) will communicate to ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Invention or said Application, and testify in any legal proceeding, assist in the preparation of any other patent property relating to the Application and the Invention or any improvements made thereto, sign/execute all lawful papers, provide all requested documents, execute and make all rightful oaths and/or declarations in connection with the Application and the Invention including any improvements made thereto, any patent applications filed therefrom, and any continuing application filed from any of the aforementioned applications, and generally do everything possible to aid ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Invention in all countries. These provisions are binding upon ASSIGNOR's heirs, legal representatives, administrators, and assigns.

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

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Inventors: **Calvin Yue-Ren Kuo, William Alexander Stevenson, James Christopher Sorenson III, Shyam Krishnamoorthy, Jonathan I. Turow, Mark Edward Rafn**

**DECLARATION**

As a below named inventor, I hereby declare that:

This declaration is directed to:

- the attached application; or
- United States Patent Application number \_\_\_\_\_ filed on \_\_\_\_\_; or
- PCT International Application number \_\_\_\_\_ filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

DocuSigned by:  
  
 6A0495582930431 ..

\_\_\_\_\_  
**Calvin Yue-Ren Kuo**

September 16, 2016  
\_\_\_\_\_  
Date

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. \_\_\_\_\_

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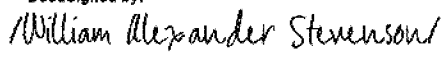
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 8DFFFC6128B94E4...  
 \_\_\_\_\_  
**William Alexander Stevenson**

September 19, 2016  
 \_\_\_\_\_  
 Date

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U.S. Patent Appln. No. \_\_\_\_\_

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 \_\_\_\_\_  
**James Christopher Sorenson III**

September 16, 2016  
 \_\_\_\_\_  
 Date



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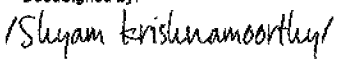
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 \_\_\_\_\_  
**Shyam Krishnamoorthy**

September 19, 2016  
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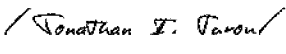
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 \_\_\_\_\_  
**Jonathan I. Turow**

September 16, 2016  
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 Date

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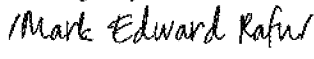
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 \_\_\_\_\_  
**Mark Edward Rafn**

September 16, 2016  
 \_\_\_\_\_  
 Date