### 12/04/2017 504670216

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4716938

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
RAUL IZAHI LOPEZ HERNANDEZ	11/28/2017
ILYA VLADIMIROVICH BRAILOVSKIY	12/01/2017
QI KEITH WANG	11/30/2017
LAURENT BRISEDOUX	11/28/2017
MANUEL ROSENDO ARANA-MANZANO	11/28/2017
MICHIEL JOSIAS DE KOCK	11/28/2017

### **RECEIVING PARTY DATA**

Name:	AMAZON TECHNOLOGIES, INC.
Street Address:	PO BOX 81226
City:	SEATTLE
State/Country:	WASHINGTON
Postal Code:	98108-1226

### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	15812989

### **CORRESPONDENCE DATA**

Fax Number: (206)623-7022

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: uspatentmail@klgates.com AMAZON/K&L GATES LLP **Correspondent Name:** 925 FOURTH AVENUE Address Line 1:

Address Line 2: **SUITE 2900** 

Address Line 4: SEATTLE, WASHINGTON 98104-1158

ATTORNEY DOCKET NUMBER:	2068843.00148/P42478-US
NAME OF SUBMITTER:	HUGH H. MATSUBAYASHI
SIGNATURE:	/Hugh H. Matsubayashi/
DATE SIGNED:	12/04/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

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# Total Attachments: 10 source=2068843-00148ASGN#page1.tif source=2068843-00148ASGN#page2.tif source=2068843-00148ASGN#page3.tif source=2068843-00148ASGN#page4.tif source=2068843-00148ASGN#page5.tif source=2068843-00148ASGN#page6.tif source=2068843-00148ASGN#page7.tif source=2068843-00148ASGN#page8.tif source=2068843-00148ASGN#page9.tif source=2068843-00148ASGN#page9.tif

PATENT REEL: 044291 FRAME: 0229

U.S. Patent Appln. No. <u>15/812,989</u> Attorney Docket No. <u>2068843.00148</u>

Filing Date November 14, 2017 Client Docket No. P42478-US

### **PARTIES TO THE ASSIGNMENT**

Assignor(s):

**Raul Izahi Lopez Hernandez** 410 Terry Avenue North Seattle, WA 98109-5210

**Ilya Vladimirovich Brailovskiy** 410 Terry Avenue North Seattle, WA 98109-5210

**Qi Keith Wang** 410 Terry Avenue North Seattle, WA 98109-5210

**Laurent Brisedoux** 410 Terry Avenue North

Assignee: Amazon Technologies, Inc. PO Box 81226 Seattle, WA 98108-1226 Seattle, WA 98109-5210

Manuel Rosendo Arana-Manzano 410 Terry Avenue North Seattle, WA 98109-5210

**Michiel Josias de Kock** 410 Terry Avenue North Seattle, WA 98109-5210

### **AGREEMENT**

WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled

"CATCH-UP PACING FOR VIDEO STREAMING" (Invention) for which a non-provisional application

for United States Letters Patent (Application):

| was filed on November 14, 2017 and accorded U.S. Application No. 15/812,989; 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

PATENT REEL: 044291 FRAME: 0230

U.S. Patent Appln. No. 15/812,989

Attorney Docket No. 2068843.00148

Filing Date November 14, 2017

Client Docket No. P42478-US

Title of Invention: CATCH-UP PACING FOR VIDEO STREAMING

Inventors: Raul Izahi Lopez Hernandez, Ilya Vladimirovich Brailovskiy, Qi Keith Wang, Laurent

Brisedoux, Manuel Rosendo Arana-Manzano, Michiel Josias de Kock.

K&L Gates LLP, associated with Customer No. 136598, to insert in the header above and here in

parentheses (U.S. Patent Application No. 15/812,989, filed November 14, 2017) this application's

U.S. application number and filing date, when known.

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)

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PATENT

U.S. Patent Appln. No. 15/812,989

Attorney Docket No. 2068843.00148

Filing Date November 14, 2017

Client Docket No. P42478-US

Title of Invention: CATCH-UP PACING FOR VIDEO STREAMING

Inventors: Raul Izahi Lopez Hernandez, Ilya Vladimirovich Brailovskiy, Qi Keith Wang, Laurent

Brisedoux, Manuel Rosendo Arana-Manzano, Michiel Josias de Kock.

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

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

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PATENT

REEL: 044291 FRAME: 0232

U.S. Patent Appln. No. <u>15/812,989</u>

Attorney Docket No. 2068843.00148

Filing Date November 14, 2017

Client Docket No. <u>P42478-US</u>

Title of Invention: CATCH-UP PACING FOR VIDEO STREAMING

Inventors: Raul Izahi Lopez Hernandez, Ilya Vladimirovich Brailovskiy, Qi Keith Wang, Laurent Brisedoux, Manuel Rosendo Arana-Manzano, Michiel Josias de Kock.

the Invention in all countries. These provisions are binding upon ASSIGNOR's heirs, legal representatives, administrators, and assigns.

U.S. Patent Appln. No. <u>15/812,989</u>

# PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

Attorney Docket No. 2068843.00148

Filing Date <u>November 14, 2017</u>	Client Docket No. <u>P42478-US</u>
Title of Invention: <u>CATCH-UP PACING FOR</u>	VIDEO STREAMING
Inventors: Raul Izahi Lopez Hernandez, II Brisedoux, Manuel Rosendo Arana-Man	ya Vladimirovich Brailovskiy, Qi Keith Wang, Laurent zano, Michiel Josias de Kock.
<u>DECLARATION</u>	
As a below named inventor, I hereby dec	lare that:
This declaration is directed to:	
the attached application; or	
United States Patent Applicat	ion number <u>15/812,989</u> filed on <u>November 14, 2017</u> ; or
PCT International Application	number filed on
The above-identified application was made	de or authorized to be made by me.
I believe that I am the original inventor o	r an original joint inventor of a claimed Invention in the
application.	
I have reviewed and understand the cont	ents of the above-identified application, and
acknowledge the duty to disclose to the U	JS 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 fals	se statement made in this declaration is punishable
under 18 USC 1001 by fine or imprisonme	ent of not more than five (5) years, or both.
/Kaul Izalii lopez Hernandez/	
Raul Izahi Lopez Hernandez	
November 28 2017	
November 28, 2017	
Date	

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500853011 v1

U.S. Patent Appln. No. <u>15/812,989</u>

# PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

Attorney Docket No. 2068843.00148

Filing Date November 14, 2017	Client Docket No. <u>P42478-US</u>
Title of Invention: <u>CATCH-UP PACING FOR</u>	VIDEO STREAMING
Inventors: Raul Izahi Lopez Hernandez, Il Brisedoux, Manuel Rosendo Arana-Manz	ya Vladimirovich Brailovskiy, Qi Keith Wang, Laurent zano, Michiel Josias de Kock.
DECLARATION	
As a below named inventor, I hereby decl	are that:
This declaration is directed to:	
the attached application; or	
United States Patent Applicati	on number <u>15/812,989</u> filed on <u>November 14, 2017</u> ; or
PCT International Application	number filed on
The above-identified application was mad	le or authorized to be made by me.
I believe that I am the original inventor or application.	an original joint inventor of a claimed Invention in the
I have reviewed and understand the conto	ents of the above-identified application, and
acknowledge the duty to disclose to the U	JS Patent & Trademark Office all information known to
me to be material to the patentability as	defined in 37 CFR 1.56.
	e statement made in this declaration is punishable ent of not more than five (5) years, or both.
Docusigned by:  // Uya Vadimirovich Brailowskiy/	
Ilya Vladimirovich Brailovskiy	
December 1, 2017	
Date	

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500853011 v1

PATENT REEL: 044291 FRAME: 0235

U.S. Patent Appln. No. 15/812,989 Attorney Docket No. 2068843.00148 Filing Date November 14, 2017 Client Docket No. P42478-US Title of Invention: <u>CATCH-UP PACING FOR VIDEO STREAMING</u> Inventors: Raul Izahi Lopez Hernandez, Ilya Vladimirovich Brailovskiy, Qi Keith Wang, Laurent Brisedoux, Manuel Rosendo Arana-Manzano, Michiel Josias de Kock. **DECLARATION** As a below named inventor, I hereby declare that: This declaration is directed to: the attached application; or  $\square$  United States Patent Application number <u>15/812,989</u> filed on <u>November 14, 2017</u>; 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: CCAEC2EC92924A2.. Qi Keith Wang November 30, 2017 Date

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500853011 v1

U.S. Patent Appln. No. <u>15/812,989</u>

# PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

Attorney Docket No. 2068843.00148

Filing Date November 14, 2017	Client Docket No. <u>P42478-US</u>
Title of Invention: <u>CATCH-UP PACING FOR</u>	
Title of invention. CATCH-OF FACING FOR	A VIDEO STREAMING
Inventors: Raul Izahi Lopez Hernandez, Il Brisedoux, Manuel Rosendo Arana-Man	ya Vladimirovich Brailovskiy, Qi Keith Wang, Laurent zano, Michiel Josias de Kock.
DECLARATION	
As a below named inventor, I hereby dec	lare that:
This declaration is directed to:	
the attached application; or	
United States Patent Applicat	ion number <u>15/812,989</u> filed on <u>November 14, 2017</u> ; or
PCT International Application	number filed on
The above identified and limiting one	da an anthanica d'Ar les manda les ma
The above-identified application was made	de or authorized to be made by me.
I believe that I am the original inventor o application.	r an original joint inventor of a claimed Invention in the
I have reviewed and understand the cont	ents of the above-identified application, and
acknowledge the duty to disclose to the	JS Patent & Trademark Office all information known to
me to be material to the patentability as defined in 37 CFR 1.56.	
	se statement made in this declaration is punishable ent of not more than five (5) years, or both.
Cocusigned by:  (lawrent Brisedoux/	
825695052CE344B	
Laurent Brisedoux	
November 28, 2017	
Date	

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500853011 v1

U.S. Patent Appln. No. 15/812,989 Attorney Docket No. 2068843.00148 Filing Date November 14, 2017 Client Docket No. P42478-US Title of Invention: CATCH-UP PACING FOR VIDEO STREAMING Inventors: Raul Izahi Lopez Hernandez, Ilya Vladimirovich Brailovskiy, Qi Keith Wang, Laurent Brisedoux, Manuel Rosendo Arana-Manzano, Michiel Josias de Kock. **DECLARATION** As a below named inventor, I hereby declare that: This declaration is directed to: the attached application; or  $\square$  United States Patent Application number <u>15/812,989</u> filed on <u>November 14, 2017</u>; 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. Manuel Rosendo Arana-Manzano/ -828F404FDCE5469.. Manuel Rosendo Arana-Manzano November 28, 2017 Date

500853011 v1 PATENT REEL: 044291 FRAME: 0238

U.S. Patent Appln. No. 15/812,989 Attorney Docket No. 2068843.00148 Filing Date November 14, 2017 Client Docket No. P42478-US Title of Invention: CATCH-UP PACING FOR VIDEO STREAMING Inventors: Raul Izahi Lopez Hernandez, Ilya Vladimirovich Brailovskiy, Qi Keith Wang, Laurent Brisedoux, Manuel Rosendo Arana-Manzano, Michiel Josias de Kock. **DECLARATION** As a below named inventor, I hereby declare that: This declaration is directed to: the attached application; or  $\square$  United States Patent Application number <u>15/812,989</u> filed on <u>November 14, 2017</u>; 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: Michiel Misias de Kock/ 90304C7521E949A... Michiel Josias de Kock November 28, 2017 Date

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500853011 v1 PATENT REEL: 044291 FRAME: 0239

**RECORDED: 12/04/2017**