508292205 12/19/2023

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT8339394

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	CONFIRMATORY ASSIGNMENT -INCLUDED THE ENTIRETY OF 4 DOCUMENTS

### **CONVEYING PARTY DATA**

Name	Execution Date
JULIEN RICARD	12/11/2023
CELINE GUEDE	12/11/2023
YANNICK OLIVIER	12/13/2023
JOAN LLACH PINSACH	12/12/2023

#### **RECEIVING PARTY DATA**

Name:	INTERDIGITAL VC HOLDINGS, INC.
Street Address:	200 BELLEVUE PARKWAY
Internal Address:	SUITE 300
City:	WILMINGTON
State/Country:	DELAWARE
Postal Code:	19809

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

Property Type	Number
Application Number:	16962908

#### **CORRESPONDENCE DATA**

**Fax Number:** (215)558-5676

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:** 2155585740

**Email:** docketing@condoroccia.com,ckatz@condoroccia.com

Correspondent Name: CONDO ROCCIA KOPTIW LLP

Address Line 1: 1800 JFK BOULEVARD

Address Line 2: SUITE 1700

Address Line 4: PHILADELPHIA, PENNSYLVANIA 19103

ATTORNEY DOCKET NUMBER:	ICVW_2018P00015WOUS	
NAME OF SUBMITTER:	CASSANDRA KATZ	
SIGNATURE:	/Cassandra Katz/	
DATE SIGNED:	12/19/2023	

**Total Attachments: 28** 

PATENT REEL: 066074 FRAME: 0680

508292205

source=2018P00015WO-1-20231214 confirmatory assignment RICARD#page1.tif source=2018P00015WO-1-20231214\_confirmatory\_assignment\_RICARD#page2.tif source=2018P00015WO-1-20231214 confirmatory assignment RICARD#page3.tif source=2018P00015WO-1-20231214 confirmatory assignment RICARD#page4.tif source=2018P00015WO-1-20231214 confirmatory assignment RICARD#page5.tif source=2018P00015WO-1-20231214 confirmatory assignment RICARD#page6.tif source=2018P00015WO-1-20231214 confirmatory assignment RICARD#page7.tif source=2018P00015WO-2-20231214 confirmatory assignment GUEDE#page1.tif source=2018P00015WO-2-20231214 confirmatory assignment GUEDE#page2.tif source=2018P00015WO-2-20231214 confirmatory assignment GUEDE#page3.tif source=2018P00015WO-2-20231214 confirmatory assignment GUEDE#page4.tif source=2018P00015WO-2-20231214 confirmatory assignment GUEDE#page5.tif source=2018P00015WO-2-20231214\_confirmatory\_assignment\_GUEDE#page6.tif source=2018P00015WO-2-20231214 confirmatory assignment GUEDE#page7.tif source=2018P00015WO-3-20231214-Confirmatory assignment OLIVIER#page1.tif source=2018P00015WO-3-20231214-Confirmatory assignment OLIVIER#page2.tif source=2018P00015WO-3-20231214-Confirmatory assignment OLIVIER#page3.tif source=2018P00015WO-3-20231214-Confirmatory assignment OLIVIER#page4.tif source=2018P00015WO-3-20231214-Confirmatory assignment OLIVIER#page5.tif source=2018P00015WO-3-20231214-Confirmatory assignment OLIVIER#page6.tif source=2018P00015WO-3-20231214-Confirmatory assignment OLIVIER#page7.tif source=2018P00015WO-4-20231214 confirmatory assignment LLACH PINSACH#page1.tif source=2018P00015WO-4-20231214 confirmatory assignment LLACH PINSACH#page2.tif source=2018P00015WO-4-20231214 confirmatory assignment LLACH PINSACH#page3.tif source=2018P00015WO-4-20231214 confirmatory assignment LLACH PINSACH#page4.tif source=2018P00015WO-4-20231214 confirmatory assignment LLACH PINSACH#page5.tif source=2018P00015WO-4-20231214 confirmatory assignment LLACH PINSACH#page6.tif source=2018P00015WO-4-20231214 confirmatory assignment LLACH PINSACH#page7.tif

### **CONFIRMATORY PATENT ASSIGNMENT**

WHEREAS, I/We, Julien RICARD, Celine GUEDE, Yannick OLIVIER and Joan LLACH PINSACH (hereinafter "Assignor(s)"), previously executed a Patent Assignment last dated May 1, 2020, (hereinafter "Patent Assignment"), with respect to, and are inventors of certain inventions or improvements set forth in one or more patent applications listed in attached Exhibit A (hereinafter "Applications"); and

WHEREAS, as a result of the Patent Assignment, InterDigital VC Holdings, Inc., a Delaware corporation having a place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809 (hereinafter "Assignee"), previously acquired the entire right, title and interest in, to and under the Applications; the inventions, discoveries and improvements disclosed or claimed therein ("Inventions"); and any and all patents, certificates of invention, utility models and other forms of protection which may be granted thereon or as a result thereof in any and all countries ("Patents"); and

WHEREAS, the Patent Assignment contains signature informalities and improperly identified the filing date of EP Patent Application No. 18305928.6 as 07 November 2018, and it is desirable to correct such errors and memorialize and confirm the prior transfer of the Inventions, Applications and Patents to InterDigital VC Holdings, Inc.

NOW, THEREFORE, for good and valuable consideration previously received, the receipt of which is hereby acknowledged, and intending to be legally bound hereby, I/we, the undersigned Assignor(s), hereby confirm that Assignor(s) intended to and have previously sold, assigned, transferred, and conveyed to Assignee, our entire right, title and interest in and to any and all of the following:

- i. the Applications, the Inventions and the Patents, for the United States, its possessions and territories and all foreign countries and territories;
- ii. the rights of priority created by the Applications and the Patents under any treaty relating thereto, including the rights to apply for Patents covering the Inventions in any and all countries;
- iii. any and all patent applications and Patents resulting from the Applications or covering the Inventions in any and all countries, including provisionals, non-provisionals, divisionals, continuations, continuations-in-part, renewals, substitutions, extensions, reissues and re-examinations thereof;
- iv. all past, present and future causes of action and enforcement rights, whether currently pending, filed or otherwise, in connection with the Applications, the Inventions, the Patents, or the patents and patent applications resulting therefrom, including without limitation, all rights to sue for any past, present or future infringements thereof, including the rights to license and to collect and receive any damages, royalties, injunctive relief, and/or any other settlements or remedies for such infringements, and

Docket No.: 2018P00015WO

including any provisional rights having arisen from any publication of the Applications or any patent application resulting therefrom;

the same to be held and enjoyed by Assignee for its own use and enjoyment, and for the use and enjoyment of its successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor(s), if this Confirmatory Patent Assignment had not been made.

AND for the aforesaid consideration Assignor(s) hereby covenant, agree and undertake to execute and deliver to Assignee, its successors, assigns, nominees, or legal representatives, whenever requested and without undue delay, all patent applications, assignments, oaths and any other papers which Assignee may deem necessary or desirable for securing to or maintaining for the Assignee the Applications, the Patents and the Inventions hereby assigned, and the undersigned Assignor(s) agree to communicate to Assignee or to its nominee all known facts respecting the Applications, the Patents and the Inventions, to testify in any legal or administrative proceeding related thereto, and generally to cooperate with and do everything possible to aid Assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its own benefit proper patent protection for the Inventions in any and all countries, all without further compensation to the undersigned Assignor(s).

AND Assignor(s) hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to Assignee, as Assignee of the entire right, title and interest, any and all Patents for the Inventions that may be issued and granted on or as a result of the Applications, in accordance with the terms of this Confirmatory Patent Assignment.

AND Assignor(s) hereby covenant that Assignor(s) have full right to convey the entire interest herein assigned, and that Assignor(s) have not executed and will not execute any agreement in conflict herewith.

CONFIRMATORY PATENT ASSIGNMENT Docket No.: 2018P00015WO

11 décembre 2023

Date

--- Docusigned by: Julien RI (UKD)

Julien RICARD

CONFIRMATORY PATENT ASSIGNMEN Docket No.: 2018P00015WO	Т
Date	Yannick OLIVIER

CONFIRMATORY PATENT ASSIGNMENT Docket No.: 2018P00015WO	
Date	Joan LLACH PINSACH

Docket No.: 2018P00015WO

# Exhibit A

Country	Application No.	Filing Date	Title
EP	18305048.3	19 January 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
EP	18305420.4	10 April 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
EP	18305928.6	11 July 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
PCT	PCT/IB2019/050492	21 January 2019	Processing a point cloud

### **CONFIRMATORY PATENT ASSIGNMENT**

WHEREAS, I/We, Julien RICARD, Celine GUEDE, Yannick OLIVIER and Joan LLACH PINSACH (hereinafter "Assignor(s)"), previously executed a Patent Assignment last dated May 1, 2020, (hereinafter "Patent Assignment"), with respect to, and are inventors of certain inventions or improvements set forth in one or more patent applications listed in attached Exhibit A (hereinafter "Applications"); and

WHEREAS, as a result of the Patent Assignment, InterDigital VC Holdings, Inc., a Delaware corporation having a place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809 (hereinafter "Assignee"), previously acquired the entire right, title and interest in, to and under the Applications; the inventions, discoveries and improvements disclosed or claimed therein ("Inventions"); and any and all patents, certificates of invention, utility models and other forms of protection which may be granted thereon or as a result thereof in any and all countries ("Patents"); and

WHEREAS, the Patent Assignment contains signature informalities and improperly identified the filing date of EP Patent Application No. 18305928.6 as 07 November 2018, and it is desirable to correct such errors and memorialize and confirm the prior transfer of the Inventions, Applications and Patents to InterDigital VC Holdings, Inc.

NOW, THEREFORE, for good and valuable consideration previously received, the receipt of which is hereby acknowledged, and intending to be legally bound hereby, I/we, the undersigned Assignor(s), hereby confirm that Assignor(s) intended to and have previously sold, assigned, transferred, and conveyed to Assignee, our entire right, title and interest in and to any and all of the following:

- i. the Applications, the Inventions and the Patents, for the United States, its possessions and territories and all foreign countries and territories;
- ii. the rights of priority created by the Applications and the Patents under any treaty relating thereto, including the rights to apply for Patents covering the Inventions in any and all countries;
- iii. any and all patent applications and Patents resulting from the Applications or covering the Inventions in any and all countries, including provisionals, non-provisionals, divisionals, continuations, continuations-in-part, renewals, substitutions, extensions, reissues and re-examinations thereof;
- iv. all past, present and future causes of action and enforcement rights, whether currently pending, filed or otherwise, in connection with the Applications, the Inventions, the Patents, or the patents and patent applications resulting therefrom, including without limitation, all rights to sue for any past, present or future infringements thereof, including the rights to license and to collect and receive any damages, royalties, injunctive relief, and/or any other settlements or remedies for such infringements, and

Docket No.: 2018P00015WO

including any provisional rights having arisen from any publication of the Applications or any patent application resulting therefrom;

the same to be held and enjoyed by Assignee for its own use and enjoyment, and for the use and enjoyment of its successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor(s), if this Confirmatory Patent Assignment had not been made.

AND for the aforesaid consideration Assignor(s) hereby covenant, agree and undertake to execute and deliver to Assignee, its successors, assigns, nominees, or legal representatives, whenever requested and without undue delay, all patent applications, assignments, oaths and any other papers which Assignee may deem necessary or desirable for securing to or maintaining for the Assignee the Applications, the Patents and the Inventions hereby assigned, and the undersigned Assignor(s) agree to communicate to Assignee or to its nominee all known facts respecting the Applications, the Patents and the Inventions, to testify in any legal or administrative proceeding related thereto, and generally to cooperate with and do everything possible to aid Assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its own benefit proper patent protection for the Inventions in any and all countries, all without further compensation to the undersigned Assignor(s).

AND Assignor(s) hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to Assignee, as Assignee of the entire right, title and interest, any and all Patents for the Inventions that may be issued and granted on or as a result of the Applications, in accordance with the terms of this Confirmatory Patent Assignment.

AND Assignor(s) hereby covenant that Assignor(s) have full right to convey the entire interest herein assigned, and that Assignor(s) have not executed and will not execute any agreement in conflict herewith.

CONFIRMATORY PATENT ASSIGNMENT	Т
Docket No.: 2018P00015WO	
<del></del>	I II DIGIDD
Date	Julien RICARD

Docket No.: 2018P00015WO

11 December 2023

Date

------Docusigned by:
(UIN GUEDE

Celine GUEDE

CONFIRMATORY PATENT ASSIGNMENT Docket No.: 2018P00015WO	
Date	Yannick OLIVIER

CONFIRMATORY PATENT ASSIGNMENT Docket No.: 2018P00015WO	
Date	Joan LLACH PINSACH

Docket No.: 2018P00015WO

# Exhibit A

Country	Application No.	Filing Date	Title
EP	18305048.3	19 January 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
EP	18305420.4	10 April 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
EP	18305928.6	11 July 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
PCT	PCT/IB2019/050492	21 January 2019	Processing a point cloud

### **CONFIRMATORY PATENT ASSIGNMENT**

WHEREAS, I/We, Julien RICARD, Celine GUEDE, Yannick OLIVIER and Joan LLACH PINSACH (hereinafter "Assignor(s)"), previously executed a Patent Assignment last dated May 1, 2020, (hereinafter "Patent Assignment"), with respect to, and are inventors of certain inventions or improvements set forth in one or more patent applications listed in attached Exhibit A (hereinafter "Applications"); and

WHEREAS, as a result of the Patent Assignment, InterDigital VC Holdings, Inc., a Delaware corporation having a place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809 (hereinafter "Assignee"), previously acquired the entire right, title and interest in, to and under the Applications; the inventions, discoveries and improvements disclosed or claimed therein ("Inventions"); and any and all patents, certificates of invention, utility models and other forms of protection which may be granted thereon or as a result thereof in any and all countries ("Patents"); and

WHEREAS, the Patent Assignment contains signature informalities and improperly identified the filing date of EP Patent Application No. 18305928.6 as 07 November 2018, and it is desirable to correct such errors and memorialize and confirm the prior transfer of the Inventions, Applications and Patents to InterDigital VC Holdings, Inc.

NOW, THEREFORE, for good and valuable consideration previously received, the receipt of which is hereby acknowledged, and intending to be legally bound hereby, I/we, the undersigned Assignor(s), hereby confirm that Assignor(s) intended to and have previously sold, assigned, transferred, and conveyed to Assignee, our entire right, title and interest in and to any and all of the following:

- i. the Applications, the Inventions and the Patents, for the United States, its possessions and territories and all foreign countries and territories;
- ii. the rights of priority created by the Applications and the Patents under any treaty relating thereto, including the rights to apply for Patents covering the Inventions in any and all countries;
- iii. any and all patent applications and Patents resulting from the Applications or covering the Inventions in any and all countries, including provisionals, non-provisionals, divisionals, continuations, continuations-in-part, renewals, substitutions, extensions, reissues and re-examinations thereof;
- iv. all past, present and future causes of action and enforcement rights, whether currently pending, filed or otherwise, in connection with the Applications, the Inventions, the Patents, or the patents and patent applications resulting therefrom, including without limitation, all rights to sue for any past, present or future infringements thereof, including the rights to license and to collect and receive any damages, royalties, injunctive relief, and/or any other settlements or remedies for such infringements, and

Docket No.: 2018P00015WO

including any provisional rights having arisen from any publication of the Applications or any patent application resulting therefrom;

the same to be held and enjoyed by Assignee for its own use and enjoyment, and for the use and enjoyment of its successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor(s), if this Confirmatory Patent Assignment had not been made.

AND for the aforesaid consideration Assignor(s) hereby covenant, agree and undertake to execute and deliver to Assignee, its successors, assigns, nominees, or legal representatives, whenever requested and without undue delay, all patent applications, assignments, oaths and any other papers which Assignee may deem necessary or desirable for securing to or maintaining for the Assignee the Applications, the Patents and the Inventions hereby assigned, and the undersigned Assignor(s) agree to communicate to Assignee or to its nominee all known facts respecting the Applications, the Patents and the Inventions, to testify in any legal or administrative proceeding related thereto, and generally to cooperate with and do everything possible to aid Assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its own benefit proper patent protection for the Inventions in any and all countries, all without further compensation to the undersigned Assignor(s).

AND Assignor(s) hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to Assignee, as Assignee of the entire right, title and interest, any and all Patents for the Inventions that may be issued and granted on or as a result of the Applications, in accordance with the terms of this Confirmatory Patent Assignment.

AND Assignor(s) hereby covenant that Assignor(s) have full right to convey the entire interest herein assigned, and that Assignor(s) have not executed and will not execute any agreement in conflict herewith.

Date	Julien RICARD	

Date	Celine GUEDE

Docket No.: 2018P00015WO

13 décembre 2023

Date

---- Docusigned by: Yannick Olivier

Yannick OLIVIER

CONFIRMATORY PATENT ASSIGNMEN Docket No.: 2018P00015WO	VT
Date	Joan LLACH PINSACH

Docket No.: 2018P00015WO

# Exhibit A

Country	Application No.	Filing Date	Title
EP	18305048.3	19 January 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
EP	18305420.4	10 April 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
EP	18305928.6	11 July 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
PCT	PCT/IB2019/050492	21 January 2019	Processing a point cloud

### **CONFIRMATORY PATENT ASSIGNMENT**

WHEREAS, I/We, Julien RICARD, Celine GUEDE, Yannick OLIVIER and Joan LLACH PINSACH (hereinafter "Assignor(s)"), previously executed a Patent Assignment last dated May 1, 2020, (hereinafter "Patent Assignment"), with respect to, and are inventors of certain inventions or improvements set forth in one or more patent applications listed in attached Exhibit A (hereinafter "Applications"); and

WHEREAS, as a result of the Patent Assignment, InterDigital VC Holdings, Inc., a Delaware corporation having a place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809 (hereinafter "Assignee"), previously acquired the entire right, title and interest in, to and under the Applications; the inventions, discoveries and improvements disclosed or claimed therein ("Inventions"); and any and all patents, certificates of invention, utility models and other forms of protection which may be granted thereon or as a result thereof in any and all countries ("Patents"); and

WHEREAS, the Patent Assignment contains signature informalities and improperly identified the filing date of EP Patent Application No. 18305928.6 as 07 November 2018, and it is desirable to correct such errors and memorialize and confirm the prior transfer of the Inventions, Applications and Patents to InterDigital VC Holdings, Inc.

NOW, THEREFORE, for good and valuable consideration previously received, the receipt of which is hereby acknowledged, and intending to be legally bound hereby, I/we, the undersigned Assignor(s), hereby confirm that Assignor(s) intended to and have previously sold, assigned, transferred, and conveyed to Assignee, our entire right, title and interest in and to any and all of the following:

- i. the Applications, the Inventions and the Patents, for the United States, its possessions and territories and all foreign countries and territories;
- ii. the rights of priority created by the Applications and the Patents under any treaty relating thereto, including the rights to apply for Patents covering the Inventions in any and all countries;
- iii. any and all patent applications and Patents resulting from the Applications or covering the Inventions in any and all countries, including provisionals, non-provisionals, divisionals, continuations, continuations-in-part, renewals, substitutions, extensions, reissues and re-examinations thereof;
- iv. all past, present and future causes of action and enforcement rights, whether currently pending, filed or otherwise, in connection with the Applications, the Inventions, the Patents, or the patents and patent applications resulting therefrom, including without limitation, all rights to sue for any past, present or future infringements thereof, including the rights to license and to collect and receive any damages, royalties, injunctive relief, and/or any other settlements or remedies for such infringements, and

Docket No.: 2018P00015WO

including any provisional rights having arisen from any publication of the Applications or any patent application resulting therefrom;

the same to be held and enjoyed by Assignee for its own use and enjoyment, and for the use and enjoyment of its successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor(s), if this Confirmatory Patent Assignment had not been made.

AND for the aforesaid consideration Assignor(s) hereby covenant, agree and undertake to execute and deliver to Assignee, its successors, assigns, nominees, or legal representatives, whenever requested and without undue delay, all patent applications, assignments, oaths and any other papers which Assignee may deem necessary or desirable for securing to or maintaining for the Assignee the Applications, the Patents and the Inventions hereby assigned, and the undersigned Assignor(s) agree to communicate to Assignee or to its nominee all known facts respecting the Applications, the Patents and the Inventions, to testify in any legal or administrative proceeding related thereto, and generally to cooperate with and do everything possible to aid Assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its own benefit proper patent protection for the Inventions in any and all countries, all without further compensation to the undersigned Assignor(s).

AND Assignor(s) hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to Assignee, as Assignee of the entire right, title and interest, any and all Patents for the Inventions that may be issued and granted on or as a result of the Applications, in accordance with the terms of this Confirmatory Patent Assignment.

AND Assignor(s) hereby covenant that Assignor(s) have full right to convey the entire interest herein assigned, and that Assignor(s) have not executed and will not execute any agreement in conflict herewith.

Date	Julien RICARD	

Date	Celine GUEDE

Date

**Yannick OLIVIER** 

Page 5 of 7

Docket No.: 2018P00015WO

12 December 2023

Date

Joan Uach Pinsach

Joan LLACH PINSACH

Docket No.: 2018P00015WO

# Exhibit A

Country	Application No.	Filing Date	Title
EP	18305048.3	19 January 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
EP	18305420.4	10 April 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
EP	18305928.6	11 July 2018	Method and apparatus for encoding/decoding a point cloud representing the external surface of a 3D object
PCT	PCT/IB2019/050492	21 January 2019	Processing a point cloud

Page 7 of 7