506418346 12/22/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT6465103

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YAO-JEN CHANG	06/20/2020
CHUN-CHI CHEN	09/25/2020
WEI-JUNG CHIEN	07/15/2020
MARTA KARCZEWICZ	07/06/2020

RECEIVING PARTY DATA

Name:	QUALCOMM INCORPORATED
Street Address: 5775 MOREHOUSE DRIVE	
City:	SAN DIEGO
State/Country:	CALIFORNIA
Postal Code:	92121-1714

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16847918

CORRESPONDENCE DATA

Fax Number: (651)735-1102

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: 6517351100

Email: pairdocketing@ssiplaw.com **Correspondent Name:** SHUMAKER & SIEFFERT, P.A.

Address Line 1: 1625 RADIO DRIVE

Address Line 2: SUITE 100

Address Line 4: WOODBURY, MINNESOTA 55125

ATTORNEY DOCKET NUMBER:	1414-764US01
NAME OF SUBMITTER:	SUSAN J. DALY
SIGNATURE:	/Susan J. Daly/
DATE SIGNED:	12/22/2020

Total Attachments: 12

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WHEREAS, WE,

- 1. Yao-Jen CHANG, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 2. Chun-Chi CHEN, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 3. Wei-Jung CHIEN, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 4. Marta KARCZEWICZ, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **INTRA BLOCK COPY MERGING DATA SYNTAX FOR VIDEO CODING** (collectively the "**INVENTIONS**") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, **QUALCOMM Incorporated** (hereinafter "**ASSIGNEE**"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No. 16/847,918 filed April 14, 2020, Qualcomm Reference Number 192422, and all provisional applications relating thereto, together with U.S. Provisional Application No. 62/836,208, filed April 19, 2019, Qualcomm Reference Number 192422P1, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE DO HEREBY authorize and request the Commissioner of Patents 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 or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at	San Dogo.	, on	4/10/2020	Joeim Clary
	City, State		Date	Yao-Jen CHANG
Done at	City, State	, on _	Date	Chun-Chi CHEN
Done at	City, State	, on _	Date	Wei-Jung CHIEN
Done at	City_State	, on _	 Date	Marta KARCZEWICZ

WHEREAS, WE,

- 1. Yao-Jen CHANG, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 2. Chun-Chi CHEN, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 3. Wei-Jung CHIEN, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 4. Marta KARCZEWICZ, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **INTRA BLOCK COPY MERGING DATA SYNTAX FOR VIDEO CODING** (collectively the "**INVENTIONS**") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, **QUALCOMM Incorporated** (hereinafter "**ASSIGNEE**"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No. 16/847,918 filed April 14, 2020, Qualcomm Reference Number 192422, and all provisional applications relating thereto, together with U.S. Provisional Application No. 62/836,208, filed April 19, 2019, Qualcomm Reference Number 192422P1, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE DO HEREBY authorize and request the Commissioner of Patents 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 or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

PATENT

Qualcomm Reference Number: 192422 Fage 3 of 3

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at		on	
	City, State	Date	Yao-Jen CHANG
Done at≨	City State	on <u>Sep. 25 , 2020</u> Date	Chun-Chi CHEN
Done at	City, State	On	Wei-Jung CHIEN
	v.ay, wate	AAWS:	wersang crites
Done at	5	on	***************************************
	City, State	Date	Marta KARCZEWICZ

WHEREAS, WE,

- 1. Yao-Jen CHANG, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 2. Chun-Chi CHEN, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 3. Wei-Jung CHIEN, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 4. Marta KARCZEWICZ, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **INTRA BLOCK COPY MERGING DATA SYNTAX FOR VIDEO CODING** (collectively the "**INVENTIONS**") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, **QUALCOMM Incorporated** (hereinafter "**ASSIGNEE**"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No. 16/847,918 filed April 14, 2020, Qualcomm Reference Number 192422, and all provisional applications relating thereto, together with U.S. Provisional Application No. 62/836,208, filed April 19, 2019, Qualcomm Reference Number 192422P1, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE DO HEREBY authorize and request the Commissioner of Patents 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 or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

PATENT

Qualcomm Reference Number: 192422 Page 3 of 3

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at	,	on	
-	City, State	Date	Yao-Jen CHANG
Done at	. 2	on	
	City, State	Date	Chun-Chi CHEN
Done at	City, State	on <u>7/15/>>></u> Date	Wei-Jung CHIEN
Done at _	City, State	on	Marta KARCZEWICZ

WHEREAS, WE,

- 1. Yao-Jen CHANG, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 2. Chun-Chi CHEN, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 3. Wei-Jung CHIEN, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 4. Marta KARCZEWICZ, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **INTRA BLOCK COPY MERGING DATA SYNTAX FOR VIDEO CODING** (collectively the "**INVENTIONS**") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, **QUALCOMM Incorporated** (hereinafter "**ASSIGNEE**"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No. 16/847,918 filed April 14, 2020, Qualcomm Reference Number 192422, and all provisional applications relating thereto, together with U.S. Provisional Application No. 62/836,208, filed April 19, 2019, Qualcomm Reference Number 192422P1, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE DO HEREBY authorize and request the Commissioner of Patents 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 or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at	2	on	
	City, State	Date	Yao-Jen CHANG
Done at _	*	on	
	City, State	Date	Chun-Chi CHEN
Done at _	·9	on	
	City, State	Date	Wei-Jung CHIEN
Done at \	an Disuo CA	on07/06/20	Loroucia
Vignation	Cirv. Stata	Date	Marta KARCZEWICZ

PATENT REEL: 054731 FRAME: 0287

RECORDED: 12/22/2020