PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JIZHENG XU	11/29/2021
LI ZHANG	11/29/2021
KAI ZHANG	11/29/2021

RECEIVING PARTY DATA

Name:	BYTEDANCE INC.	
Street Address:	12655 WEST JEFFERSON BOULEVARD, SIXTH FLOOR	
Internal Address:	SUITE NO. 137	
City:	LOS ANGELES	
State/Country:	CALIFORNIA	
Postal Code:	90066	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17570753

CORRESPONDENCE DATA

Fax Number: (206)359-9000

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: (206) 359-8000

Email: mcopp@perkinscoie.com

Correspondent Name: PERKINS COIE LLP / VINAY SATHE

Address Line 1: P.O. BOX 1247

Address Line 4: SEATTLE, WASHINGTON 98111-1247

ATTORNEY DOCKET NUMBER:	130408-8582.US14	
NAME OF SUBMITTER:	MICHAIAH COPP	
SIGNATURE:	/Michaiah Copp/	
DATE SIGNED:	01/10/2022	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 4

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PATENT REEL: 058590 FRAME: 0796

Attorney Docket No.: C20W5967.01US.BPCA1 P1809118999US15-BPCA1

In re Patent Application of:

Applicants: BEIJING BYTEDANCE NETWORK

TECHNOLOGY CO., LTD. (北京字节跳动网络技术

有限公司) and BYTEDANCE INC.

Inventors: Jizheng XU, et al.

Application No.: TBD Confirmation No.: TBD

Filing Date: TBD

Title: SAMPLE IDENTIFICATION FOR INTRA BLOCK COPY IN VIDEO CODING

INVENTOR DECLARATION AND ASSIGNMENT TO BYTEDANCE INC.

I hereby declare that:

I believe I am an original joint inventor of a claimed invention in (1) a patent application entitled:

SAMPLE IDENTIFICATION FOR INTRA BLOCK COPY IN VIDEO CODING

which is filed on <u>July 9, 2020</u>, as PCT Application No. <u>PCT/CN2020/100992</u>, which, under the Paris Convention, claims the priority to and benefits of

(2) PCT patent application entitled "BUFFER MANAGEMENT AND BLOCK VECTOR CODING FOR INTRA BLOCK COPY" filed as International Patent Application No. PCT/CN2019/095504 on July 10, 2019.

I authorize and request an attorney appointed by an applicant or assignee to hereafter insert above the filing date and application number of each application when known.

I believe the following persons are original joint inventors of the above-identified patent application(s):

Jizheng XU, San Diego, CA, USA;

Li ZHANG, San Diego, CA, USA;

Kai ZHANG, San Diego, CA, USA;

Hongbin LIU, Beijing, China; and

Yue WANG, Beijing, China;

Attorney Docket No.: C20W5967.01US.BPCA1 P1809118999US15-BPCA1

I made, authorized to make, or hereby make or authorize to make the above-identified patent application at the U.S. Patent and Trademark Office or other patent offices.

I have reviewed and understand the contents of the above-identified patent application(s) including the claims.

I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

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

INVENTOR ASSIGNMENT TO BYTEDANCE INC.

As a named inventor, I hereby assign to BYTEDANCE INC., a corporation, having a place of business at 12655 West Jefferson Boulevard, Sixth Floor, Suite No. 137, Los Angeles, California 90066, United States, and its successors and assigns (collectively "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in the each and all of the following applications:

- (1) PCT patent application entitled "SAMPLE IDENTIFICATION FOR INTRA BLOCK COPY IN VIDEO CODING" filed as PCT Application No. PCT/CN2020/100992 on July 9, 2020;
 - (2) PCT patent application entitled "BUFFER MANAGEMENT AND BLOCK VECTOR CODING FOR INTRA BLOCK COPY" filed as International Patent Application No. PCT/CN2019/095504 on July 10, 2019.

I authorize and request an attorney appointed by an applicant or assignee to hereafter insert above the filing date and application number of said application(s) when known.

This assignment includes the entire right, title and interest in the above-identified patent applications, all legal equivalents thereof in any country, any and all United States, Patent Cooperation Treaty, Chinese and other foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, Patent Cooperation Treaty, Chinese and all other foreign patents, utility models, and design registrations, and the right to claim priority based on the filing dates of the above-identified patent applications under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for

PATENT REEL: 058590 FRAME: 0798 inventors' contributes for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assigner of the entire right, title and interest throughout the world in said inventions and improvements by operation of an employment agreement between me and the Assigner existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer to the Assigner any right, title and interest I may have in said inventions and improvements anywhere in the with!

The foregoing assignments, sale and transfer have been made for good and valuable consideration, the receipt of which is benefity acknowledged by me.

I beneby represent and constant that to assignment, sale, agreement or encumbrance has been as will be made or entered into that would conflict with the assignment of said inventions and ingrenoments to the Assignmen.

I further coverage for myself and my respective tears, legal representatives and excipato easier the Assignment, including various procedures, tooks and documentation in connection
with this assignment, including, but not limited to, providing to the Assignme promptly upon
the request of the Assignment all portions facts and documents relating to said invention and
improvements, and said patents, said legal equivalents or other legal instrument as may be
known and accessible to me and testifying as to the same in any interference. Infigration, or
proceeding relating thereto, and promptly executing and delivering to the Assigner or its legal
expressionative any and all papers, documents, insumments or affidovits in connection with
obtaining, maintaining, issuing or enforcing said application, said inventions and
improvements, and said patents, and equivalents and other legal instrument which may be
necessary or desirable to carry out the purposes thereof.

I am computed to execute the above disclaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Fall name of inversor Judicing XV //// Inventor's signature	
Oute Secondar 29, 2021	
Fall name of inventor: Li 2HANG Inventor's equation: One: Management 2HANG	
Full name of inventor: Kni ZHANG / C Inventor's signature: Date: Navanibis 29, 2021.	<u> </u>
The Assigner hereby acknowledges the assignment.	The undersigned is authorized to

Attorney Docket No.: C20W5967.01US.BPCA1 P1809118999US15-BPCA1

act on behalf of the Assignee.

Assignee: BYTEDANCE INC.

Authorized officer's legal name: Qi Li

Authorized officer's title: Authorized Legal Counsel

Authorized officer's signature: Q Va

Date: November 30, 2021

Perkins Cole LLP P.O. Box 1247 Seattle, Washington 98111-1247 Telephone: (858) 720-5700

Facsimile: (206) 359-7198

PATENT REEL: 058590 FRAME: 0800

RECORDED: 01/10/2022