PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
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EPAS ID: PAT8001040

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HONGBIN LIU	10/30/2019
YUE WANG	10/30/2019

RECEIVING PARTY DATA

Name:	BEIJING BYTEDANCE NETWORK TECHNOLOGY CO., LTD.
Street Address:	Room B-0035, 2/F, No. 3 Building,
Internal Address:	No. 30, Shixing Road, Shijingshan District
City:	Beijing
State/Country:	China
Postal Code:	100041

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	18310344

CORRESPONDENCE DATA

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NAME OF SUBMITTER:	BRANDT D. HOWELL
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DATE SIGNED:	06/12/2023

Total Attachments: 7
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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: Kai ZHANG, et al.

Application No.: TBD   Confirmation No.: TBD

Filing Date: TBD

Title: MULTI-PARAMETERS BASED INTRA
PREDICTION

INVENTOR DECLARATION AND ASSIGNMENT TO BEIJING BYTEDANCE NETWORK TECHNOLOGY CO., LTD.

I hereby declare that:

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

MULTI-PARAMETERS BASED INTRA PREDICTION

which is filed on ___November 6, 2019___, as PCT Application No.
PCT/CN2019/116027, which, under the Paris Convention, claims the priority to and benefits of

(2) PCT patent application entitled "LINEAR MODEL DERIVATION FOR
CROSS-COMPONENT PREDICTION" filed as International Patent Application No.
PCT/CN2018/114158 on November 06, 2018.

(3) PCT patent application entitled "LINEAR MODEL DERIVATION FOR
CROSS-COMPONENT PREDICTION" filed as International Patent Application No.
PCT/CN2018/118799 on December 01, 2018.

(4) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2018/119709 on December 07, 2018.

(5) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2018/125412 on December 29, 2018.

(6) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2019/070002 on January 01, 2019.

(7) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2019/075874 on February 22, 2019.

(8) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2019/075993 on February 24, 2019.

(9) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2019/076195 on February 26, 2019.

(10) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2019/079396 on March 24, 2019.

(11) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2019/079431 on March 25, 2019.

(12) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2019/079769 on March 26, 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):

Kai ZHANG, San Diego, CA, USA;

Li ZHANG, San Diego, CA, USA;

Hongbin LIU, Beijing, China;

Jizheng XU, San Diego, CA, USA; and

Yue WANG, Beijing, China.

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
BEIJING BYTEDANCE NETWORK TECHNOLOGY CO., LTD.

As a named inventor, I hereby assign to BEIJING BYTEDANCE NETWORK TECHNOLOGY CO., LTD. (北京字节跳动网络技术有限公司), a corporation having a place

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of business at Room B-0035, 2/F, No.3 Building, No.30, Shixing Road, Shijingshan District, Beijing 100041, China (中国北京市石景山区实兴大街 30 号院 3 号楼 2 层 B-0035 房间), 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 "MULTI-PARAMETERS BASED INTRA PREDICTION" filed as PCT Application No. PCT/CN2019/116027 on

November 6, 2019

(2) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2018/114158 on November 06, 2018.

(3) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2018/118799 on December 01, 2018.

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(12) PCT patent application entitled "LINEAR MODEL DERIVATION FOR CROSS-COMPONENT PREDICTION" filed as International Patent Application No. PCT/CN2019/079769 on March 26, 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

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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 inventors' certificates for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee 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 Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer to the Assignee any right, title and interest I may have in said inventions and improvements anywhere in the world.

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

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent 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, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

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

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Full name of inventor: Hongbin LIU

Inventor's signature: _Hongbin Liu_

Date: _2019/10/30_

Full name of inventor: Yue WANG

Inventor's signature: _Yue Wang_

Date: _2019/10.30_

The Assignee hereby acknowledges the assignment. The undersigned is authorized to act on behalf of the Assignee.

Assignee: BEIJING BYTEDANCE NETWORK TECHNOLOGY CO., LTD. (北京字节跳动网络技术有限公司)

Authorized officer's legal name: Meixin Li

Authorized officer's title: Authorized Legal Counsel

Authorized officer's signature: _Meixin Li_

Date: _2019.10.31_

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