

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6394610

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
CHUNLI LIANG	06/09/2020
SHUQIANG XIA	06/10/2020
ZHISONG ZUO	11/02/2020
PENG HAO	06/24/2020
XIANGHUI HAN	06/10/2020
RECEIVING PARTY DATA	
Name:	ZTE CORPORATION
Street Address:	ZTE PLAZA, KEJI ROAD SOUTH
Internal Address:	HI-TECH INDUSTRIAL PARK, NANSHAN DISTRICT
City:	SHENZHEN, GUANGDONG
State/Country:	CHINA
Postal Code:	518057
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16872252
CORRESPONDENCE DATA	
Fax Number:	
<i>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.</i>	
Email:	mbright@perkinscoie.com
Correspondent Name:	VINAY SATHE
Address Line 1:	PERKINS COIE LLP
Address Line 2:	PO BOX 1247
Address Line 4:	SEATTLE, WASHINGTON 98111-1247
ATTORNEY DOCKET NUMBER:	125096-8030.US00
NAME OF SUBMITTER:	MEGHAN BRIGHT
SIGNATURE:	/Meghan Bright/
DATE SIGNED:	11/10/2020
This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 15

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source=Executed Assign-Decs (all inventors)#page15.tif

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Applicant(s): ZTE Corporation

Inventor(s): Chunli Liang et al.

Application No.: 16/872,252

Filing Date: May 11, 2020

Title: GROUPING AND USE OF SHORT
SEQUENCE SIGNALS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY INVENTOR
UNDER RULE 37 C.F.R. § 1.63

I, Chunli Liang, of Shenzhen, Guangdong, P.R. China, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

GROUPING AND USE OF SHORT SEQUENCE SIGNALS

which was filed on May 11, 2020, as Application No. 16/872,252, and which is a continuation of and claims benefit of priority to International Patent Application No. PCT/CN2017/110525, filed on November 10, 2017.

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

Shuqiang Xia, of Shenzhen, Guangdong, P.R. China;

Zhisong Zuo, of Shenzhen, Guangdong, P.R. China;

Peng Hao, of Shenzhen, Guangdong, P.R. China; and

Xianghui Han, of Shenzhen, Guangdong, P.R. China.

The above-identified application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified patent application 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.

ASSIGNMENT

I hereby assign to ZTE Corporation, a corporation of P.R. China, having a place of business at ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong 518057, P.R. China, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent, entitled *GROUPING AND USE OF SHORT SEQUENCE SIGNALS*, filed on May 11, 2020, and assigned U.S. Application Number 16/872,252, and which is a continuation of and claims benefit of priority to International Patent Application No. PCT/CN2017/110525, filed on November 10, 2017.

This assignment includes the entire right, title and interest in said application(s), all legal equivalents thereof in any country, any and all United States and 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 application(s) and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application(s) 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 my name or 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.

Inventor : Chunli Liang et al.
Appl. No. : 16/872,252
Filed : May 11, 2020
Page : 3 of 3

Docket No. 125096-8030.US00

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(s), 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.

Full name of inventor: CHUNLI LIANG

Inventor's signature: Chunli LIANG

Date: 2020-6-9

Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
Telephone: (858) 720-5700
Facsimile: (206) 359-7198

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Applicant(s): ZTE Corporation

Inventor(s): Chunli Liang et al.

Application No.: 16/872,252

Filing Date: May 11, 2020

Title: **GROUPING AND USE OF SHORT
SEQUENCE SIGNALS**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY INVENTOR
UNDER RULE 37 C.F.R. § 1.63

I, Shuqiang Xia, of Shenzhen, Guangdong, P.R. China, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

GROUPING AND USE OF SHORT SEQUENCE SIGNALS

which was filed on May 11, 2020, as Application No. 16/872,252, and which is a continuation of and claims benefit of priority to International Patent Application No. PCT/CN2017/110525, filed on November 10, 2017.

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

Chunli Liang, of Shenzhen, Guangdong, P.R. China;

Zhisong Zuo, of Shenzhen, Guangdong, P.R. China;

Peng Hao, of Shenzhen, Guangdong, P.R. China; and

Xianghui Han, of Shenzhen, Guangdong, P.R. China.

The above-identified application was made or authorized to be made by me.

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

Inventor : Chunli Liang et al.
Appl. No. : 16/872,252
Filed : May 11, 2020
Page : 2 of 3

Docket No. 125096-8030.US00

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ASSIGNMENT

I hereby assign to ZTE Corporation, a corporation of P.R. China, having a place of business at ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong 518057, P.R. China, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent, entitled *GROUPING AND USE OF SHORT SEQUENCE SIGNALS*, filed on May 11, 2020, and assigned U.S. Application Number 16/872,252, and which is a continuation of and claims benefit of priority to International Patent Application No. PCT/CN2017/110525, filed on November 10, 2017.

This assignment includes the entire right, title and interest in said application(s), all legal equivalents thereof in any country, any and all United States and 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 application(s) and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application(s) 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 my name or 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.

Inventor : Chunli Liang et al.
Appl. No. : 16/872,252
Filed : May 11, 2020
Page : 3 of 3

Docket No. 125096-8030.US00

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(s), 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.

Full name of inventor: SHUQIANG XIA

Inventor's signature: SHUQIANG XIA

Date: 2020-6-10

Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
Telephone: (858) 720-5700
Facsimile: (206) 359-7198

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Applicant(s): ZTE Corporation

Inventor(s): Chunli Liang et al.

Application No.: 16/872,252

Filing Date: May 11, 2020

Title: GROUPING AND USE OF SHORT
SEQUENCE SIGNALS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**DECLARATION AND ASSIGNMENT BY INVENTOR
UNDER RULE 37 C.F.R. § 1.63**

I, Zhisong Zuo, of Shenzhen, Guangdong, P.R. China, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

GROUPING AND USE OF SHORT SEQUENCE SIGNALS

which was filed on May 11, 2020, as Application No. 16/872,252, and which is a continuation of and claims benefit of priority to International Patent Application No. PCT/CN2017/110525, filed on November 10, 2017.

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

Chunli Liang, of Shenzhen, Guangdong, P.R. China;
Shuqiang Xia, of Shenzhen, Guangdong, P.R. China;
Peng Hao, of Shenzhen, Guangdong, P.R. China; and
Xianghui Han, of Shenzhen, Guangdong, P.R. China.

The above-identified application was made or authorized to be made by me.

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

Inventor : Chunli Liang et al.
Appl. No. : 16/872,252
Filed : May 11, 2020
Page : 2 of 3

Docket No. 125096-8030.US00

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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.

ASSIGNMENT

I hereby assign to ZTE Corporation, a corporation of P.R. China, having a place of business at ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong 518057, P.R. China, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent, entitled *GROUPING AND USE OF SHORT SEQUENCE SIGNALS*, filed on May 11, 2020, and assigned U.S. Application Number 16/872,252, and which is a continuation of and claims benefit of priority to International Patent Application No. PCT/CN2017/110525, filed on November 10, 2017.

This assignment includes the entire right, title and interest in said application(s), all legal equivalents thereof in any country, any and all United States and 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 application(s) and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application(s) 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 my name or 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.

Inventor : Chunli Liang et al.
Appl. No. : 16/872,232
Filed : May 11, 2020
Page : 3 of 3

Docket No. 125096-8030.US00

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(s), 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.

Full name of inventor: ZHISONG ZUO

Inventor's signature: Zhisong Zuo

Date: 2020.11.2

Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
Telephone: (858) 720-5700
Facsimile: (206) 359-7198

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Applicant(s): ZTE Corporation

Inventor(s): Chunli Liang et al.

Application No.: 16/872,252

Filing Date: May 11, 2020

Title: GROUPING AND USE OF SHORT
SEQUENCE SIGNALS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY INVENTOR
UNDER RULE 37 C.F.R. § 1.63

I, Peng Hao, of Shenzhen, Guangdong, P.R. China, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

GROUPING AND USE OF SHORT SEQUENCE SIGNALS

which was filed on May 11, 2020, as Application No. 16/872,252, and which is a continuation of and claims benefit of priority to International Patent Application No. PCT/CN2017/110525, filed on November 10, 2017.

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

Chunli Liang, of Shenzhen, Guangdong, P.R. China;
Shuqiang Xia, of Shenzhen, Guangdong, P.R. China;
Zhisong Zuo, of Shenzhen, Guangdong, P.R. China; and
Xianghui Han, of Shenzhen, Guangdong, P.R. China.

The above-identified application was made or authorized to be made by me.

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

Inventor : Chunli Liang et al.
Appl. No. : 16/872,252
Filed : May 11, 2020
Page : 2 of 3

Docket No. 125096-8030.US00

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ASSIGNMENT

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Inventor : Chunli Liang et al.
Appl. No. : 16/872,252
Filed : May 11, 2020
Page : 3 of 3

Docket No. 125096-8030.US00

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

Full name of inventor: PENG HAO

Inventor's signature: PENG HAO

Date: 2020-6-24

Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
Telephone: (858) 720-5700
Facsimile: (206) 359-7198

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Applicant(s): ZTE Corporation

Inventor(s): Chunli Liang et al.

Application No.: 16/872,252

Filing Date: May 11, 2020

Title: GROUPING AND USE OF SHORT
SEQUENCE SIGNALS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY INVENTOR
UNDER RULE 37 C.F.R. § 1.63

I, Xianghui Han, of Shenzhen, Guangdong, P.R. China, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

GROUPING AND USE OF SHORT SEQUENCE SIGNALS

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Chunli Liang, of Shenzhen, Guangdong, P.R. China;

Shuqiang Xia, of Shenzhen, Guangdong, P.R. China;

Zhisong Zuo, of Shenzhen, Guangdong, P.R. China; and

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Appl. No. : 16/872,252
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Appl. No. : 16/872,252
Filed : May 11, 2020
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I am competent to execute the above declaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Full name of inventor: XIANGHUI HAN

Inventor's signature: XIANGHUI HAN

Date: 2020-06-10

Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
Telephone: (858) 720-5700
Facsimile: (206) 359-7198