# 505252291 12/26/2018

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5299061

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
JIANDONG LI	12/18/2018
HONGYAN LI	12/14/2018
SHUN ZHANG	12/17/2018
TING ZHENG	12/14/2018
RONGHUI HOU	12/14/2018
ZHICONG XIE	12/14/2018
PENGYU HUANG	12/14/2018
YINGHONG MA	12/17/2018
MIN SHENG	12/17/2018
YAN ZHANG	12/17/2018
QIN LIU	12/14/2018

#### **RECEIVING PARTY DATA**

Name:	XIDIAN UNIVERSITY	
Street Address:	NO. 2 SOUTH TAIBAI ROAD	
City:	XI'AN, SHAANXI	
State/Country:	CHINA	
Postal Code:	710071	

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

Property Type	Number
Application Number:	16312935

#### **CORRESPONDENCE DATA**

**Fax Number:** (801)328-1707

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:** 801-533-9800

Email: lbateman@wnlaw.com
Correspondent Name: MICHAEL J. FRODSHAM
Address Line 1: 60 EAST SOUTH TEMPLE

Address Line 2: SUITE 1000

Address Line 4: SALT LAKE CITY, UTAH 84111

PATENT 52291 REEL: 047982 FRAME: 0037

505252291

ATTORNEY DOCKET NUMBER:	17171.22	
NAME OF SUBMITTER:	MICHAEL J. FRODSHAM	
SIGNATURE:	/Michael J. Frodsham/	
DATE SIGNED:	12/26/2018	
Total Attachments: 22		
source=17171-22_Assignments#page1.tif		
source=17171-22_Assignments#page2.tif		
source=17171-22_Assignments#page3.tif		
source=17171-22_Assignments#page4.tif		
source=17171-22_Assignments#page5.tif		
source=17171-22_Assignments#page6.tif		
source=17171-22_Assignments#page7.tif		
source=17171-22_Assignments#page8.tif		
source=17171-22_Assignments#page9.tif		
source=17171-22_Assignments#page10.tif		
source=17171-22_Assignments#page11.tif		
source=17171-22_Assignments#page12.tif		
source=17171-22_Assignments#page13.tif		
source=17171-22_Assignments#page14.tif		
source=17171-22_Assignments#page15.tif		
source=17171-22_Assignments#page16.tif		
source=17171-22_Assignments#page17.tif		
source=17171-22_Assignments#page18.tif		
source=17171-22_Assignments#page19.tif		
source=17171-22_Assignments#page20	source=17171-22_Assignments#page20.tif	

source=17171-22\_Assignments#page21.tif source=17171-22\_Assignments#page22.tif

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

# **ASSIGNMENT**

I, JIANDONG LI of No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, have invented a method and apparatus entitled ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS BASED UPLINK ACCESS METHOD hereinafter called the "invention."

Assignee, XIDIAN UNIVERSITY, a university of the country of P.R. China, having a principal place of business at No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, desires to secure the entire right, title and interest in the invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO ASSIGNEE:

The entire right, title and interest in the invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of the application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

I hereby authorize and request the United States Commissioner of Patents and Trademarks and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents to issue any and all patents on the invention to Assignee as the owner of the entire interest, for the sole use of Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue and other United States and foreign patent applications on the invention, and all lawful documents requested by Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

DATED\_ Dec. 18. 2018

Jiandone LI

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

# **ASSIGNMENT**

I, HONGYAN LI of No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, have invented a method and apparatus entitled ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS BASED UPLINK ACCESS METHOD hereinafter called the "invention."

Assignee, XIDIAN UNIVERSITY, a university of the country of P.R. China, having a principal place of business at No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, desires to secure the entire right, title and interest in the invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO ASSIGNEE:

The entire right, title and interest in the invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of the application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

I hereby authorize and request the United States Commissioner of Patents and Trademarks and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents to issue any and all patents on the invention to Assignee as the owner of the entire interest, for the sole use of Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue and other United States and foreign patent applications on the invention, and all lawful documents requested by Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

DATED Dec. 14. 2018.

Hongyan XI

2

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

# **ASSIGNMENT**

I, SHUN ZHANG of No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, have invented a method and apparatus entitled ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS BASED UPLINK ACCESS METHOD hereinafter called the "invention."

Assignee, XIDIAN UNIVERSITY, a university of the country of P.R. China, having a principal place of business at No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, desires to secure the entire right, title and interest in the invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO ASSIGNEE:

The entire right, title and interest in the invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of the application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

I hereby authorize and request the United States Commissioner of Patents and Trademarks and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents to issue any and all patents on the invention to Assignee as the owner of the entire interest, for the sole use of Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue and other United States and foreign patent applications on the invention, and all lawful documents requested by Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

DATED DEC. 17. 2018.

Shun ZHANG

2

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

# **ASSIGNMENT**

I, TING ZHENG of No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, have invented a method and apparatus entitled ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS BASED UPLINK ACCESS METHOD hereinafter called the "invention."

Assignee, XIDIAN UNIVERSITY, a university of the country of P.R. China, having a principal place of business at No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, desires to secure the entire right, title and interest in the invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO ASSIGNEE:

The entire right, title and interest in the invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of the application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

I hereby authorize and request the United States Commissioner of Patents and Trademarks and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents to issue any and all patents on the invention to Assignee as the owner of the entire interest, for the sole use of Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue and other United States and foreign patent applications on the invention, and all lawful documents requested by Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

DATED Dec. 14, 218

Zheng Ting Ting ZHENG

2

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

#### **ASSIGNMENT**

I, RONGHUI HOU of No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, have invented a method and apparatus entitled ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS BASED UPLINK ACCESS METHOD hereinafter called the "invention."

Assignee, XIDIAN UNIVERSITY, a university of the country of P.R. China, having a principal place of business at No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, desires to secure the entire right, title and interest in the invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO ASSIGNEE:

The entire right, title and interest in the invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of the application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

I hereby authorize and request the United States Commissioner of Patents and Trademarks and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents to issue any and all patents on the invention to Assignee as the owner of the entire interest, for the sole use of Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue and other United States and foreign patent applications on the invention, and all lawful documents requested by Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

DATED Dec. 14, 2018

Ronghui Hon

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

# **ASSIGNMENT**

I, ZHICONG XIE of No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, have invented a method and apparatus entitled ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS BASED UPLINK ACCESS METHOD hereinafter called the "invention."

Assignee, XIDIAN UNIVERSITY, a university of the country of P.R. China, having a principal place of business at No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, desires to secure the entire right, title and interest in the invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO ASSIGNEE:

The entire right, title and interest in the invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of the application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

I hereby authorize and request the United States Commissioner of Patents and Trademarks and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents to issue any and all patents on the invention to Assignee as the owner of the entire interest, for the sole use of Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue and other United States and foreign patent applications on the invention, and all lawful documents requested by Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

DATED Pec. 14, 2018.

Xie Zhiconer

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

#### **ASSIGNMENT**

I, PENGYU HUANG of No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, have invented a method and apparatus entitled ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS BASED UPLINK ACCESS METHOD hereinafter called the "invention."

Assignee, XIDIAN UNIVERSITY, a university of the country of P.R. China, having a principal place of business at No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, desires to secure the entire right, title and interest in the invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO ASSIGNEE:

The entire right, title and interest in the invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of the application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

I hereby authorize and request the United States Commissioner of Patents and Trademarks and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents to issue any and all patents on the invention to Assignee as the owner of the entire interest, for the sole use of Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue and other United States and foreign patent applications on the invention, and all lawful documents requested by Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

Pengyn Huang

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

# **ASSIGNMENT**

I, YINGHONG MA of No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, have invented a method and apparatus entitled ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS BASED UPLINK ACCESS METHOD hereinafter called the "invention."

Assignee, XIDIAN UNIVERSITY, a university of the country of P.R. China, having a principal place of business at No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, desires to secure the entire right, title and interest in the invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO ASSIGNEE:

The entire right, title and interest in the invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of the application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

I hereby authorize and request the United States Commissioner of Patents and Trademarks and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents to issue any and all patents on the invention to Assignee as the owner of the entire interest, for the sole use of Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue and other United States and foreign patent applications on the invention, and all lawful documents requested by Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

DATED Dec. 17, 2018

Yinghong MA

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

# **ASSIGNMENT**

I, MIN SHENG of No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, have invented a method and apparatus entitled ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS BASED UPLINK ACCESS METHOD hereinafter called the "invention."

Assignee, XIDIAN UNIVERSITY, a university of the country of P.R. China, having a principal place of business at No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, desires to secure the entire right, title and interest in the invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO ASSIGNEE:

The entire right, title and interest in the invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of the application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

I hereby authorize and request the United States Commissioner of Patents and Trademarks and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents to issue any and all patents on the invention to Assignee as the owner of the entire interest, for the sole use of Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue and other United States and foreign patent applications on the invention, and all lawful documents requested by Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

DATED\_ Dec. 17, 2018.

Min SHENG

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

# **ASSIGNMENT**

I, YAN ZHANG of No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, have invented a method and apparatus entitled ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS BASED UPLINK ACCESS METHOD hereinafter called the "invention."

Assignee, XIDIAN UNIVERSITY, a university of the country of P.R. China, having a principal place of business at No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, desires to secure the entire right, title and interest in the invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO ASSIGNEE:

The entire right, title and interest in the invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of the application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

I hereby authorize and request the United States Commissioner of Patents and Trademarks and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents to issue any and all patents on the invention to Assignee as the owner of the entire interest, for the sole use of Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue and other United States and foreign patent applications on the invention, and all lawful documents requested by Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

DATED Dec. 17. 2018.

Yan Zhang.

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

#### **ASSIGNMENT**

I, QIN LIU of No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, have invented a method and apparatus entitled ORTHOGONAL FREQUENCY DIVISION MULTIPLE ACCESS BASED UPLINK ACCESS METHOD hereinafter called the "invention."

Assignee, XIDIAN UNIVERSITY, a university of the country of P.R. China, having a principal place of business at No. 2 South Taibai Road, Xi'an, Shaanxi 710071, P.R. China, desires to secure the entire right, title and interest in the invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to me by Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO ASSIGNEE:

The entire right, title and interest in the invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of the application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

I hereby authorize and request the United States Commissioner of Patents and Trademarks and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents to issue any and all patents on the invention to Assignee as the owner of the entire interest, for the sole use of Assignee, its successors, assigns and legal

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue and other United States and foreign patent applications on the invention, and all lawful documents requested by Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

DATED Dec. 14. 2018.

representatives.