### 505889046 01/29/2020

EPAS ID: PAT5935747

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
XUAN WEI	01/28/2020
SARAH ELIZABETH SHELDON	01/29/2020
MAIKA TAKITA	01/28/2020
JAY MICHAEL GAMBETTA	01/28/2020

#### **RECEIVING PARTY DATA**

Name:	INTERNATIONAL BUSINESS MACHINES CORPORATION		
Street Address:	NEW ORCHARD ROAD		
City:	ARMONK		
State/Country:	NEW YORK		
Postal Code:	10504		

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

Property Type	Number
Application Number:	16775833

#### **CORRESPONDENCE DATA**

**Fax Number:** (281)886-7716

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Email: uspto@garglaw.com

Correspondent Name: IBM YOR IPLAW (GLF) C/O GARG LAW FIRM, P

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Address Line 4: STAFFORD, TEXAS 77477

ATTORNEY DOCKET NUMBER:	P201902375US01
NAME OF SUBMITTER:	VANESSA PHAM
SIGNATURE:	/VANESSA PHAM/
DATE SIGNED:	01/29/2020
	This document serves as an Oath/Declaration (37 CFR 1.63).

**Total Attachments: 4** 

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PATENT REEL: 051659 FRAME: 0871

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> PATENT REEL: 051659 FRAME: 0872

IBM DOCKET NUMBER: P201902375US01

## DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT

## SIMULTANEOUSLY DRIVING ADJACENT QUBIT PAIRS

~
As a below named inventor, I hereby declare that:
This declaration is directed to the attached application, or (if following box is checked):
[ ] United States application or PCT international application number filed on
The above-identified application was made or authorized to be made by me.
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
I have reviewed and understand the contents of the application, including the claims.
I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to
be material to patentability as defined in 37 CFR Section 1.56.
Whereas, the undersigned inventor(s) has/have made certain inventions, improvements, and discoveries (herein
referred to as the "Invention") disclosed in the above-identified patent application and further identified by the IBM
Docket Number provided above in the header of this document;
Whereas, International Business Machines Corporation, a corporation of New York having a place of business at
Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned inventor desires to grant
to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent
applications and patents directed thereto;
Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby
acknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and
otherwise transfers or has transferred to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns,
the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent
application, and any and all other patent applications and patents for the Invention which may be applied for or
granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions.
continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and
all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each
undersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office
to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the
Invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in
and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full end of
the terms for which any and all such patents may be granted, as fully and entirely as would have been held and
enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees to execute
any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment
or perfecting title to the Invention and all related patents and applications, in IBM, its successors, legal
representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.
Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights
under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right
to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not
execute, any document or instrument in conflict herewith. Each undersigned inventor also hereby grants IBM, its
successors, legal representatives, and assigns, the right to insert in this Assignment any further identification
(including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of
this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any disputes
will be resolved in a New York state court or federal court sited in New York.
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001
by fine or imprisonment of not more than five (5) years, or both.

(1) Legal Name of Inventor: XUAN WEI

Signature: \_\_\_\_\_\_\_ Date: 1/28/200

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## DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT

## SIMILITANDOUSLY DRIVING ADJACENT QUBIT PAIRS

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This declaration is	inventor Deservice directed to the attach protection or PCT of	ed application, or (	if following box is c ion number	heeked)	filed on
here exists and an analysis of the control of the c	the organic and a control of the con		inventor of a clame ton metalogy fraction of a clame of	free all information seniors, and firther ideal value of a place and a place of being here sold, assigns or has a legal representation which may be a place and place and a pl	snown to me to speed to the test of parent p
ar I com Name of	Inventor SARAH		HILLIWIN		

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Signature <u>(2013)</u> 1/24/20

# DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT

## SIMULTANEOUSLY DRIVING ADJACENT QUBIT PAIRS

As a below named inventor, I hereby declare that: This declaration is directed to the attached application, or (if following box is checked):  [ ] United States application or PCT international application number
The above-identified application was made or authorized to be made by me.  I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.  I have reviewed and understand the contents of the application, including the claims.  I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.  Whereas, the undersigned inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the IBM Docket Number provided above in the header of this document;  Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armouk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;  Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to IBM (the "ASSIGNER"), its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filling of such applications and granting of such patents. In addition, each undersigned in
Signature: Marka Takta Date: Jan 28, 2020

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IBM DOCKET NUMBER: P201902375US01

## DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT

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The above-identified application was made or authorized to be made by me.  I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I have reviewed and understand the contents of the application, including the claims.	ng box is checked):
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I have reviewed and understand the contents of the application, including the claims.	filed on
be material to patentability as defined in 37 CFR Section 1.56. Whereas, the undersigned inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the IB Docket Number provided above in the header of this document; Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned inventor desires to ground to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto; Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to IBM (the "ASSIGNEE"), its successors, legal representatives, and assign the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, ar all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark Offit to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been	by me.  of a claimed invention in the application.  ding the claims.  Indemark Office all information known to me to ons, improvements, and discoveries (herein at application and further identified by the IBM of New York having a place of business at an and each undersigned inventor desires to grant vention and in and to any and all patent sufficiency thereof being hereby ells or has sold, assigns or has assigned, and successors, legal representatives, and assigns, the above-identified United States patent the Invention which may be applied for or jurisdictions, including all divisions, aparts, substitutes, and extensions thereof, and granting of such patents. In addition, each the United States Patent and Trademark Office are any foreign patent, granted for the the entire worldwide right, title, and interest in representatives, and assigns to the full end of and entirely as would have been held and each undersigned inventor agrees to execute asonably related to recording this Assignment ions, in IBM, its successors, legal ors, legal representatives, or assigns. igations to sell, assign, and transfer the rights y may not have the full and unencumbered right ferred, and has not executed, and will not assigned inventor also hereby grants IBM, its successary or desirable for recordation of the state of New York, and any disputes and York.

(4) Legal Name of Inventor: JAY MICHAEL GAMBETTA

Signature:

Date: 01/28/2020

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**PATENT** 

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