508366144 01/31/2024

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT8413333

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the SECOND INVENTOR'S NAME previously recorded on Reel 059813 Frame 0978. Assignor(s) hereby confirms the ASSIGNMENT.

CONVEYING PARTY DATA

Name	Execution Date
CHARLES RYAN WALLACE	04/28/2022
MAX E. NIELSEN	05/02/2022
ALEXANDER LOUIS BRAUN	04/29/2022
DANIEL GEORGE DOSCH	05/03/2022
KURT PLEIM	05/03/2022
HAITAO O. DAI	05/03/2022

RECEIVING PARTY DATA

Name:	NORTHROP GRUMMAN SYSTEMS CORPORATION
Street Address:	2980 FAIRVIEW PARK DRIVE
City:	FALLS CHURCH
State/Country:	VIRGINIA
Postal Code:	22042-4511

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17736517

CORRESPONDENCE DATA

Fax Number: (216)621-4072

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: 2166212234

Email: lpringle@tarolli.com

Correspondent Name: TAROLLI, SUNDHEIM, COVELL & TUMMINO LLP

Address Line 1: 950 MAIN AVENUE

Address Line 2: SUITE 710

Address Line 4: CLEVELAND, OHIO 44113

ATTORNEY DOCKET NUMBER:	NGES-030556-US-PRI
NAME OF SUBMITTER:	CHRISTOPHER P. HARRIS
SIGNATURE:	/Christopher P Harris/

PATENT 508366144 REEL: 066384 FRAME: 0488

Total Attachments: 7 source=OriginalPatentAssignmentCoverSheet_Assignment#page1.tif source=OriginalPatentAssignmentCoverSheet_Assignment#page2.tif source=OriginalPatentAssignmentCoverSheet_Assignment#page3.tif source=OriginalPatentAssignmentCoverSheet_Assignment#page4.tif source=OriginalPatentAssignmentCoverSheet_Assignment#page5.tif source=OriginalPatentAssignmentCoverSheet_Assignment#page5.tif

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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7313398

-	SUBMISSION TYPE:	NEW ASSIGNMENT
~~~~~	NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
CHARLES RYAN WALLACE	04/28/2022
MAX E. RYAN	05/02/2022
ALEXANDER LOUIS BRAUN	04/29/2022
DANIEL GEORGE DOSCH	05/03/2022
KURT PLEIM	05/03/2022
HAITAO O. DAI	05/03/2022

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Phone: 2166212234

lpringle@tarolli.com Email:

TAROLLI, SUNDHEIM, COVELL & TUMMINO LLP Correspondent Name:

1300 EAST NINTH STREET Address Line 1:

Address Line 2: **SUITE 1700** 

Address Line 4: CLEVELAND, OHIO 44114

ATTORNEY DOCKET NUMBER:	NGES-030556-US-PRI
NAME OF SUBMITTER:	CHRISTOPHER P. HARRIS
SIGNATURE:	/Christopher P Harris/
DATE SIGNED:	05/04/2022

**PATENT** REEL: 066384 FRAME: 0490

507266477

# **Total Attachments: 5** source=ES030556PRI-Assignment#page1.tif

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#### ASSIGNMENT

WHEREAS, I, Max E. Nielsen together with Alexander Louis Braun, Daniel George Dosch, Kurt Pleim, Haitao O. Dai and Charles Ryan Wallace, hereinafter referred to as Assignor, have jointly invented certain new and useful improvements in PULSE-GENERATOR-BASED BIAS-LEVEL SENSORS FOR RECIPROCAL QUANTUM LOGIC, described in an application for United States Letters Patent, executed by me on the date as stated below;

WHEREAS, Northrop Grumman Systems Corporation, a Delaware corporation, having its principal place of business at 2980 Fairview Park Drive, Falls Church, VA 22042-4511, United States of America, hereinafter referred to as Assignee, is desirous of acquiring the entire right, title and interest in, to and under said improvements and said application:

NOW, THEREFORE, in consideration of Assignor's obligations to Northrop Grumman Systems Corporation, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor has sold, assigned transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in, to and under said improvements, and said application and all divisions, renewals, continuations, and continuations-in-part thereof, and all United States Letters patent that may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent that may hereafter be filed for said improvements in any country or countries foreign to the United States, including the full right to claim for any such application the priority benefits of the International Convention for the Protection of Industrial Property and other priority-conferring treaties, and all Letters Patent that may be granted for said improvements in any country or countries foreign to the United States and all extensions, divisions, continuations, continuations-in-part, renewals and reissues thereof; and Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to said Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument;

Assignor hereby acknowledges that at the time of making the improvements herein identified, Assignor was under an obligation to assign to Assignee, Assignor's entire right, title and interest in, to and under said improvements;

Assignor hereby covenants that Assignor has full right to convey the interest herein assigned, and that Assignor has not executed, and will not execute, any agreement in conflict herewith and that Assignee, Northrop Grumman Systems Corporation, its successors, assigns and other legal representatives shall have the right to hold and enjoy for its and their own use and benefit, to the end of the term or terms for which such Letters Patent shall or may be granted, reissued or extended as fully and completely as the same right could have been held and enjoyed by Assignor had this Assignment not been made.

Assignor hereby further covenants and agrees to communicate to Assignee, its successors, legal representatives and assigns, any and all facts known to Assignor respecting said improvements; to promptly provide Assignee with all documents relating to said improvements, said invention, and said Letters Patent as may be known or accessible to Assignor; to testify as to the same in any interference or litigation or other legal proceedings related thereto; to sign all lawful papers, execute all extensions, continuations, continuations—in-part, divisional and reissue applications; and to make all rightful oaths or declarations and generally do everything possible to aid Assignee, its successors, legal representatives and assigns in obtaining and enforcing all the rights herein conveyed for said improvements in all countries without further compensation, but at the expense of Assignee, its successors, legal representatives and assigns.

The undersigned has executed and delivered this instrument this ZA executed the referenced patent application on the ZO day of ZA		, 2022, and has
		MAX E. NIELSEN
The undersigned has executed and delivered this instrument this day of day of	day of 	, 2022, and has
		ALEXANDER LOUIS BRAUN
The undersigned has executed and delivered this instrument this day of day of	day of, 2022.	. 2022, and has
A1111111111111111111111111111111111111		DANIEL GEORGE DOSCH

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WHEREAS, I, Max E. Nielsen together with Alexander Louis Braun, Daniel George Dosch, Kurt Pleim, Haitao O. Dai and Charles Ryan Wallace, hereinafter referred to as Assignor, have jointly invented certain new and useful improvements in PULSE-GENERATOR-BASED BIAS-LEVEL SENSORS FOR RECIPROCAL QUANTUM LOGIC, described in an application for United States Letters Patent, executed by me on the date as stated below:

WHEREAS, Northrop Grumman Systems Corporation, a Delaware corporation, having its principal place of business at 2980 Fairview Park Drive, Falls Church, VA 22042-4511, United States of America, hereinafter referred to as Assignce, is desirous of acquiring the entire right, title and interest in, to and under said improvements and said application:

NOW, THEREFORE, in consideration of Assignor's obligations to Northrop Grumman Systems Corporation, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged. Assignor has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns. Assignor's entire right, title and interest in, to and under said improvements, and said application and all divisions, renewals, continuations, and continuations-in-part thereof, and all United States Letters patent that may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent that may hereafter be filled for said improvements in any country or countries foreign to the United States, including the full right to claim for any such application the priority benefits of the International Convention for the Protection of Industrial Property and other priority-conferring treaties, and all Letters Patent that may be granted for said improvements in any country or countries foreign to the United States, and all extensions, divisions, continuations, continuations-in-part, renewals and reissues thereof, and Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to said Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument;

Assignor hereby acknowledges that at the time of making the improvements herein identified, Assignor was under an obligation to assign to Assignee, Assignor's entire right, (tite and interest in, to and under said improvements;

Assignor hereby covenants that Assignor has full right to convey the interest herein assigned, and that Assignor has not executed, and will not execute, any agreement in conflict herewith and that Assignee, Northrop Grumman Systems Corporation, its successors, assigns and other legal representatives shall have the right to hold and enjoy for its and their own use and benefit, to the end of the term or terms for which such Letters Patent shall or may be granted, reissued or extended as fully and completely as the same right could have been held and enjoyed by Assignor had this Assignment not been made.

Assignor hereby further covenants and agrees to communicate to Assignee, its successors, legal representatives and assigns, any and all facts known to Assignor respecting said improvements; to promptly provide Assignee with all documents relating to said improvements, said invention, and said Letters Patent as may be known or accessible to Assignor; to testify as to the same in any interference or litigation or other legal proceedings related thereto; to sign all lawful papers, execute all extensions, continuations, continuations-in-part, divisional and reissue applications; and to make all rightful oaths or declarations and generally do everything possible to aid Assignee, its successors, legal representatives and assigns in obtaining and enforcing all the rights herein conveyed for said improvements in all countries without further compensation, but at the expense of Assignee, its successors, legal representatives and assigns.

The undersigned has executed and delivered this instrument this	day of	, 2022, and has
executed the referenced patent application on the		
	***************************************	MAX E. NIELSEN
The undersigned has executed and delivered this instrument this $29\%$ executed the referenced patent application on theday of		, 2022, and has
Med Jan	anna de la companya del companya de la companya de la companya del companya de la	
	š	ALEXANDER LOUIS BRAUN
The undersigned has executed and delivered this instrument this	day of	
. <del></del>		DANIEL GEORGE DOSCH
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1

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NOW, THEREFORE, in consideration of Assignor's obligations to Northrop Grumman Systems Corporation, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in, to and under said improvements, and said application and all divisions, renewals, continuations, and continuations-in-part thereof, and all United States Letters patent that may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent that may hereafter be filed for said improvements in any country or countries foreign to the United States, including the full right to claim for any such application the priority benefits of the International Convention for the Protection of Industrial Property and other priority-conferring treaties, and all Letters Patent that may be granted for said improvements in any country or countries foreign to the United States and all extensions, divisions, continuations, continuations-in-part, renewals and reissues thereof; and Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to said Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument;

Assignor hereby acknowledges that at the time of making the improvements herein identified, Assignor was under an obligation to assign to Assignee, Assignor's entire right, title and interest in, to and under said improvements;

Assignor hereby covenants that Assignor has full right to convey the interest herein assigned, and that Assignor has not executed, and will not execute, any agreement in conflict herewith and that Assignee, Northrop Grumman Systems Corporation, its successors, assigns and other legal representatives shall have the right to hold and enjoy for its and their own use and benefit, to the end of the term or terms for which such Letters Patent shall or may be granted, reissued or extended as fully and completely as the same right could have been held and enjoyed by Assignor had this Assignment not been made.

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The undersigned has executed and delivered this instrument this executed the referenced patent application on the day of	day of, 2022.	, 2022, and has
		MAX E. NIELSEN
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	, A	LEXANDER LOUIS BRAUN
The undersigned has executed and delivered this instrument this	3 day of <u>MAY</u> Y ,2022.	, 2022, and has
	, Ga	DANIEL GEORGE DOSCH

# NGES-030556-US-PRI

The undersigned has executed and delivered this instrument this day of	, 2022, and has
executed the referenced patent application on the	2.
1 Knot 1/c	
	KURT PLEIM
The undersigned has executed and delivered this instrument this 3 day of	May , 2022, and has 2.
	HAITAO O. DAI
The undersigned has executed and delivered this instrument this day of, 202	, 2022, and has 2.
	CHARLES RYAN WALLACE

# NGES-030556-US-PRI

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executed the referenced patent application	on theday of		
	***************************************		KURT PLEIM
The undersigned has executed and o	delivered this instrument this	day of	
executed the referenced patent application	on theday of	, 2022.	A PARA GIAG TIME
			HAITAO O. DAI
The undersigned has executed and c executed the referenced patent application	lelivered this instrument this 22 on the 22 day of Asc	day of <u>April</u>	2022, and has
	- Sula	Q //	
	14.000	CH/	ARLES RYAN WALLACE