504878851 04/20/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 EPAS ID: PAT4925591 Stylesheet Version v1.2

 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ZAKARIA MOKTADIR	04/14/2018
ANDREW SHARPE	03/07/2018
ANDREW JAMES SHIELDS	03/08/2018

RECEIVING PARTY DATA

Name:	KABUSHIKI KAISHA TOSHIBA
Street Address:	1-1, SHIBAURA 1-CHOME, MINATO-KU
City:	TOKYO
State/Country:	JAPAN

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15903537

CORRESPONDENCE DATA

Fax Number: (703)413-2220

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: (703) 413-3000

Email: dgebremichael@oblon.com

Correspondent Name: OBLON, ET AL.

Address Line 1: 1940 DUKE STREET

Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER:	511265US
NAME OF SUBMITTER:	DEJEN GEBREMICHAEL
SIGNATURE:	/Dejen Gebremichael/
DATE SIGNED:	04/20/2018
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 3

source=511265usAssign#page1.tif source=511265usAssign#page2.tif source=511265usAssign#page3.tif

PATENT 504878851 REEL: 045599 FRAME: 0620

Attorney Docket Number: 511265US

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

Title of Invention	ON-CHIP INTEGRATION OF MMIC AND SINGLE PHOTON DETECTORS	
As the below name	d inventor, I hereby declare that:	
This declaration \square	The attached application, or	
is directed to:	United States application or PCT international application number 15/903,537 filed on February 23, 2018	
The above-identified	d application was made or authorized to be made by me.	
I believe that I am th	ne original inventor or an original joint inventor of a claimed invention in the application.	
	ushiki Kaisha Toshiba to as "ASSIGNEE") having places of business at: 1-1, Shibaura 1-chome,	
Minato-ku , Tokyo, and to any Letters P and all foreign count	<u>Japan</u> , is desirous of acquiring the entire right, title and interest in and to said invention and in atent that may be granted therefore in the United States and its territorial possessions and in any tries;	
acknowledged, and a said ASSIGNEE, the and in all foreign countries relevant Interninterest in and to an	ORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby for other good and valuable consideration, I, by these presents do sell, assign and transfer unto e full and exclusive right to the said invention in the United States and its territorial possessions untries (including the right to claim priority under the terms of the International Convention and ational Treaties and Arrangements from the aforesaid application) and the entire right, title and may and all Letters Patent which may be granted therefor in the United States and its territorial any and all foreign countries and in and to any and all divisions, reissues, continuations, ewals thereof.	
any and all foreign assignee of my entir (his) successors and	e and request the Patent Office Officials in the United States and its territorial possessions and countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the e right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its assigns, to the full end of the term for which said Letters Patent may be granted, as fully and would have been held by me had this Assignment and sale not been made.	
Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.		
	edge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 lent of not more than five (5) years, or both.	
LEGAL NAME OF	· ·	
Inventor: Zakaria N	MOKTADIR Date: 14/04/2018	
Signature: Z	Mouta di	

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P.
ATTORNEYS AT LAW
1940 DUKE STREET
ALEXANDRIA, VIRGINIA 22314

PATENT REEL: 045599 FRAME: 0621 Attorney Docket Number: 511265US

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

Title of Invention	ON-CHIP INTEGRATION OF MMIC AND SINGLE PHOTON DETECTORS	
As the below name	d inventor, I hereby declare that:	
This declaration	The attached application, or	
is directed to:	United States application or PCT international application number 15/903,537 filed on February 23, 2018	
The above-identified	d application was made or authorized to be made by me.	
I believe that I am th	ne original inventor or an original joint inventor of a claimed invention in the application.	
WHEREAS, Kabi	shiki Kaisha Toshiba to as "ASSIGNEE") having places of business at: 1-1, Shibaura 1-chome,	
Minato-ku, Tokyo,	Japan, is desirous of acquiring the entire right, title and interest in and to said invention and in atent that may be granted therefore in the United States and its territorial possessions and in any	
said ASSIGNEE, the and in all foreign co- other relevant Intern- interest in and to an	ORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby for other good and valuable consideration, I, by these presents do sell, assign and transfer unto a full and exclusive right to the said invention in the United States and its territorial possessions untries (including the right to claim priority under the terms of the International Convention and ational Treaties and Arrangements from the aforesaid application) and the entire right, title and y and all Letters Patent which may be granted therefor in the United States and its territorial any and all foreign countries and in and to any and all divisions, reissues, continuations, ewals thereof.	
any and all foreign of assignee of my entire (his) successors and	e and request the Patent Office Officials in the United States and its territorial possessions and countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its assigns, to the full end of the term for which said Letters Patent may be granted, as fully and would have been held by me had this Assignment and sale not been made.	
Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.		
I hereby acknowle by fine or imprisonme	dge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 ent of not more than five (5) years, or both.	
LEGAL NAME OF I	NVENTOR	
nventor: Andrew S	HARPE Date: 7 May 18	
Signature:		

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P. ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

> **PATENT** REEL: 045599 FRAME: 0622

Attorney Docket Number: 511265US

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

Invention	ON-CHIP INTEGRATION OF MMIC AND SINGLE PHOTON DETECTORS	
As the below name	d inventor, I hereby declare that:	
This declaration [The attached application, or	
is directed to:	United States application or PCT international application number 15/903,537 filed on February 23, 2018	
The above-identifie	d application was made or authorized to be made by me.	
I believe that I am th	he original inventor or an original joint inventor of a claimed invention in the application.	
	ushiki Kaisha Toshiba to as "ASSIGNEE") having places of business at: <u>1-1, Shibaura 1-chome,</u>	
Minato-ku , Tokyo, and to any Letters P and all foreign coun	Japan, is desirous of acquiring the entire right, title and interest in and to said invention and in attent that may be granted therefore in the United States and its territorial possessions and in any tries;	
acknowledged, and said ASSIGNEE, the and in all foreign co other relevant Interninters in and to an	ORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby for other good and valuable consideration, I, by these presents do sell, assign and transfer unto e full and exclusive right to the said invention in the United States and its territorial possessions untries (including the right to claim priority under the terms of the International Convention and ational Treaties and Arrangements from the aforesaid application) and the entire right, title and many and all Letters Patent which may be granted therefor in the United States and its territorial any and all foreign countries and in and to any and all divisions, reissues, continuations, ewals thereof.	
any and all foreign assignee of my entir (his) successors and	e and request the Patent Office Officials in the United States and its territorial possessions and countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the e right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its assigns, to the full end of the term for which said Letters Patent may be granted, as fully and would have been held by me had this Assignment and sale not been made.	
Further, I agree that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything cossible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.		
I hereby acknowle by fine or imprisonm	edge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 ent of not more than five (5) years, or both.	
LEGAL NAME OF 1		
nventor: Andrew J	fames SHIELDS Date: 8/3/18	
Signature:	andrew mules	

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P.

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

> PATENT REEL: 045599 FRAME: 0623

RECORDED: 04/20/2018