503654892 01/19/2016

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SHIH-EN SHIH	01/11/2016
BEN GOROSPE	01/11/2016
KEVIN LEONG	01/11/2016
WILLIAM R. DEAL	01/11/2016

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:	14996066

CORRESPONDENCE DATA

Fax Number: (248)858-4201

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: 2488584200

Email: cardin@milleripgroup.com

Correspondent Name: JOHN A MILLER, MILLER IP GROUP, PLC

Address Line 1: 42690 WOODWARD AVE., STE. 300 Address Line 4: BLOOMFIELD HILLS, MICHIGAN 48304

ATTORNEY DOCKET NUMBER:	NGC-00193(007897-0030)
NAME OF SUBMITTER:	JOHN A. MILLER
SIGNATURE:	/John A. Miller/
DATE SIGNED:	01/19/2016

Total Attachments: 5

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ASSIGNMENT

WHEREAS, We, Shih-En Shih, Ben Gorospe, Kevin Leong and William R. Deal, hereinafter referred to as Assignors, have invented certain new and useful improvements in TERAHERTZ FILTER TUNING, described in an application for United States Letters Patent, executed by us 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 Assignors' obligations to Northrop Grumman Systems Corporation, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignors have 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, Assignors' 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 Assignors hereby authorize and request 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:

Assignors hereby acknowledge 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;

Assignors hereby covenant that Assignor has full right to convey the interest herein assigned, and that Assignors have 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 Assignors had this Assignment not been made.

Assignors hereby further covenant and agree 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 Assignors; 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 dectarations 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.

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IN WITNESS WHEREOF, the undersigned day of January, 2016, and has executed day of January, 2016.	d has executed and delivered this instrument this d the referenced patent application on the
	<u> </u>
	Shih-En Shih, Assignor
A notary public or other officer completing this ce signed the document to which this certificate is atte that document.	rtificate verifies only the identity of the individual who ached, and not the truthfulness, accuracy, or validity o
STATE OF CALIFORNIA)	
) ss COUNTY OF LOS ANGELES)	
On January 1, 2016, before me, Lorna L. Schoproved to me on the basis of satisfactory evidence to this instrument and acknowledged to me that he/st capacity(ies), and that by his/her/their signature(s) upon behalf of which the person(s) acted, executed the	o be the person(s) whose name(s) is/aré subscribed ne/they executed the same in his/her/their authorized on the instrument to be the person(s), or the entity
I certify under PENALTY OF PERJURY under th paragraph is true and correct.	e laws of the State of Florida that the foregoing
WITNESS my hand and official seal	LORNA L. SCHOTT Commission # 2129330 Notary Public - California Los Angeles County My Comm. Expires Nov 3, 2019
Notary's Signature	(Seal)

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IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this day of January, 2016, and has executed the referenced patent application on the	
day of bandary, 2010.	B. An
	Ben Gorospe, Assignor
	ertificate verifies only the identity of the individual who ached, and not the truthfulness, accuracy, or validity of
STATE OF CALIFORNIA)	•
COUNTY OF LOS ANGELES)	
On January, 2016, before me, Lorna L. Schoproved to me on the basis of satisfactory evidence to this instrument and acknowledged to me that he/sicapacity(ies), and that by his/her/their signature(s) upon behalf of which the person(s) acted, executed the	on the instrument to be the person(s), or the entity
I certify under PENALTY OF PERJURY under the paragraph is true and correct.	,
WITNESS my hand and official seal	LORNA L. SCHOTT Commission # 2129330 Notary Public - California Los Angeles County My Comm. Expires Nov 3, 2019
Notary's Signature	(Seal)

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	d has executed and delivered this instrument this ed the referenced patent application on thet1
	Kein Jan
	Kevin Leong, Assignor
	ertificate verifies only the identity of the individual who ached, and not the truthfulness, accuracy, or validity of
STATE OF CALIFORNIA)) ss COUNTY OF LOS ANGELES)	
On January, 2016, before me, Lorna L. Schoproved to me on the basis of satisfactory evidence to	ott, Notary Public, personally appeared Kevin Leong, to be the person(s) whose name(s) is/are subscribed

I certify under PENALTY OF PERJURY under the laws of the State of Florida that the foregoing paragraph is true and correct.

to this instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(jes), and that by his/her/their signature(s) on the instrument to be the person(s), or the entity

WITNESS my hand and official seal

upon behalf of which the person(s) acted, executed the instrument.

Notary's Signature

LORMA L. SCHOTT
Commission # 2129330
Motary Public - California
Los Angeles County
My Comm. Expires Hoy 3, 2019

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IN WITNESS WHEREOF, the undersign day of January, 2016, and has executed day of January, 2016.	ed has executed and delivered this instrument this ted the referenced patent application on the
	William R. Deal, Assignor
	certificate verifies only the identity of the individual who ttached, and not the truthfulness, accuracy, or validity of
STATE OF CALIFORNIA)) ss COUNTY OF LOS ANGELES)	
Deal, proved to me on the basis of satisfactory subscribed to this instrument and acknowledged to	ichott, Notary Public, personally appeared William R. evidence to be the person(s) whose name(s) is/a/e me that he/she/they executed the same in his/her/their signature(s) on the instrument to be the person(s), or executed the instrument.
I certify under PENALTY OF PERJURY under t paragraph is true and correct.	he laws of the State of Florida that the foregoing
WITNESS my hand and official seal	LORNA L. SCHOTT Commission # 2129330 Notary Public - California Los Angeles County My Comm. Expires Nov 3, 2019
Notary's Signature	(Seal)

PATENT

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