PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
STEPHEN J. ENGEL	08/19/2014
ROBERT J. CHRIST	08/19/2014
JOHN MADSEN	08/19/2014
JERRELL A. NARDIELLO	08/19/2014
SKYLAR BLAIZ COBB	08/19/2014
SCOTT W. SHAFFAR	08/14/2014

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:	14469125	

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.

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Correspondent Name: TAROLLI, SUNDHEIM, COVELL & TUMMINO LLP

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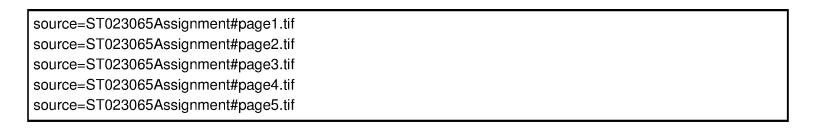
Address Line 2: CHRISTOPHER P. HARRIS
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ATTORNEY DOCKET NUMBER:	NG(ST)023056 US PRI
NAME OF SUBMITTER:	CHRISTOPHER P. HARRIS
SIGNATURE:	/Christopher P Harris/
DATE SIGNED:	08/26/2014

Total Attachments: 5

REEL: 033613 FRAME: 0298

PATENT



PATENT REEL: 033613 FRAME: 0299

ASSIGNMENT

WHEREAS, I, Stephen J. Engel, together with Robert J. Christ, John Madsen, Jerrell A. Nardiello, Skylar Blaiz Cobb and Scott W. Shaffar, hereinafter referred to as Assignor have jointly invented certain new and useful improvements in COLOR-BASED FOREIGN OBJECT DETECTION SYSTEM, 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.

IN WITNESS WHEREOF, the undersigned hereof the referenced party of the state of New (or k)	as executed and delivered this is atent application on the day of	nstrument this 19 day of of Avgust , 2014.
COUNTY OF Nassay) ss		
· · · · · · · · · · · · · · · · · · ·	-	
on before me, from before me, proved to me on the basis of satisfactory evidence to tacknowledged to me that he/she/they executed the same in on the instrument to be the person(s), or the entity upon bel	be the person(s) whose name(s) is/an his/her/their authorized capacity(ies).	re subscribed to this instrument and, and that by his/her/their signature(s)
• • • •		
I certify under PENALTY OF PERJURY under the laws of and correct.	f the State of NEWTOV K	that the foregoing paragraph is true
WITNESS in train and official seal. Notary's Signature	SARA THOMPSON SARA THOMPSON Notary Public - State of Nev No. 011145 186383 Gualifled in Nassau Cou	ntv

Page 1 of 4

PATENT REEL: 033613 FRAME: 0300

IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this day of Avgust, 2014, and has executed the referenced patent application or the day of Avgust, 2014.
STATE OF NEWY OF L COUNTY OF NASSOU ROBERT UCHRIST ROBERT UCHRIST
COUNTY OF Nascau) ss
On before me,
I certify under PENALTY OF PERJURY under the laws of the State of \(\sum_{\text{cov}} \sum_{\text{cov}} \) that the foregoing paragraph is true and correct.
WITNEST may hand and official seal. SARA THOMPSON Notary Public - State of New York No. 011H6186383 Notary's Signature Notary's Signature Outsided in Nossau County My Commission Expires April 28, 2016
IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this day of August , 2014, and has executed the referenced patent application on the day of August , 2014. JOHN MADSEN
7
STATE OF New York
COUNTY OF Nassau) ss
STATE OF New (or k)) ss COUNTY OF Nassau On 10 before me, 10 Madsen, proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to this instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument to be the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.
On 10 before me, John Madsen, proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to this instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s)

	couted and delivered this instrument this 19 day of opplication on the 19 day of AV av St , 2014. JERGELL A. NARDIELLO
STATE OF NEW YORK	JERWELL A. NARDIELLO
COUNTY OF Nasaw) ss	
and acknowledged to me that he/she/they executed the same signature(s) on the instrument to be the person(s), or the entity upon	
I certify under PENALTY OF PERJURY under the laws of the St and correct.	ate of <u>New York</u> that the foregoing paragraph is true
WITNESS hand and official seal.	
Notary's Signature	SARA THOMPSON SOLARY Public - State of New York No. 017H6186383 August Subject in Nassau County My Commission Expires April 28, 2015
	cuted and delivered this instrument this day of
STATE OF	SKYLAR BLAIZ COBB
STATE OF) ss COUNTY OF)	
	ne person(s) whose name(s) is/are subscribed to this instrument and their authorized capacity(ies), and that by his/her/their signature(s)
Cobb, proved to me on the basis of satisfactory evidence to be the acknowledged to me that he/she/they executed the same in his/he on the instrument to be the person(s), or the entity upon behalf of	ne person(s) whose name(s) is/are subscribed to this instrument and their authorized capacity(ies), and that by his/her/their signature(s)
Cobb, proved to me on the basis of satisfactory evidence to be the acknowledged to me that he/she/they executed the same in his/he on the instrument to be the person(s), or the entity upon behalf of a certify under PENALTY OF PERJURY under the laws of the St.	ne person(s) whose name(s) is/are subscribed to this instrument and r/their authorized capacity(ies), and that by his/her/their signature(s) which the person(s) acted, executed the instrument.

IN WITNESS , 201	WHEREOF, the under 4, and has executed the reference	signed has executed an erenced patent application	d delivered this in on the day of	strument this	day of
		JER	RELL A. NARDIELI	.0	
STATE OF)				
STATE OF) ss 				
and acknowledged to signature(s) on the ins	before me, me on the basis of satisfact me that he/she/they executivement to be the person(s).	cuted the same in his/her, or the entity upon behalf	r/their authorized cap of which the person(s)	acity(ies), and that it acted, executed the in	oy his/her/their istrument.
I certify under PENAl and correct.	LTY OF PERJURY under t	he laws of the State of		_ that the foregoing pa	ragraph is true
WITNESS my hand a	nd official seal.				
Notary's	Signature			(SEAL)	
IN WITNESS Av6067 20	S WHEREOF, the under 14, and has executed the ref	rsigned has executed ar ferenced patent application	nd delivered this in on the 19 day o	strument this 19	day of, 2014.
STATE OF <u>Calif</u> COUNTY OF <u>Los</u>	Angles, ss				
On 1/2/17, 2014 Cobb, proved to me acknowledged to me on the instrument to	before me, <u>LOYNAL</u> to the basis of satisfactory that he/she/they executed the the person(s), or the entition	evidence to be the person he same in his/her/their au y upon behalf of which the	(s) whose name(s) is/ thorized capacity(ies), person(s) acted, exec	age subscribed to this, and that by his/her/thuted the instrument.	instrument and wir signature(s)
I certify under PENA and correct.	LTY OF PERJURY under	the laws of the State of 👤	pimodila	that the foregoing p	aragraph is true
WITNESS my hand a	and official seal. Signature		LORNA L. SCHOTT Commission # 195532 Notary Public - Californ Los Angeles County fy Comm. Expires Nov 3.	ia 🖁 💃 (SEAL)	

IN WITNESS WHEREOF, the undersigned had not been also as the control of the contr	s executed and delivered this instrument ent application on the 14th day of 1	t this 14th day of 4ug , 2014.
STATE OF <u>Colifornia</u>) COUNTY OF <u>San Diago</u>) ss	SCOTT W. SHAFFAR	
COUNTY OF San Duge) ss		
On Angly Cow before me, Kaven Mostry proved to me on the basis of satisfactory evidence to be acknowledged to me that he/she/they executed the same in on the instrument to be the person(s), or the entity upon behavior	the person(s) whose name(s) (stare subscr	ribed to this instrument and t by kisk her/the ir signature (s)
I certify under PENALTY OF PERJURY under the laws of and correct.	he State of California that the	e foregoing paragraph is true
WITNESS my hand and official seal. Coron Author Notary's Signature	Allerthaltachart	(SEAL)