505796339 11/27/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
GREGORY D. GOODNO	10/10/2019
JOSHUA E. ROTHENBERG	10/16/2019

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:	16592201

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	303399-230823/011279-0030	
NAME OF SUBMITTER:	JOHN A. MILLER	
SIGNATURE:	/John A. Miller/	
DATE SIGNED:	11/27/2019	

Total Attachments: 3

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ASSIGNMENT

WHEREAS, We, Gregory D. Goodno and Joshua E. Rothenberg, hereinafter referred to as Assignors, have invented certain new and useful improvements in SPECTRALLY COMBINED FIBER LASER AMPLIFIER SYSTEM INCLUDING OPTICALLY MONOLITHIC BEAM SHAPER ARRAY WITH COMPACT TILES, 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 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.

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	d has executed and delivered this instrument this d the referenced patent application on the
	<u> 9 Inla</u>
	Gregory D. Goodno, Assignor
A notary public or other officer completing this ce signed the document to which this certificate is attathat 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)	
personally appeared Gregory D. Goodno, proved to person(s) whose name(s) is/are subscribed to this in executed the same in his/her/their authorized capac	ne on the basis of satisfactory evidence to be the estrument and acknowledged to me that he/she/they bity(ies), and that by his/her/their signature(s) on the behalf of which the person(s) acted, executed the
I certify under PENALTY OF PERJURY under the paragraph is true and correct.	laws of the State of California that the foregoing
WITNESS my hand and official seal	CAMBA SECERAMIST Sutary Public - California Lab Angeles County Commission of ISECIBAL My Comm. Expires Mac 22, 2023
Notary's Signature	(Seal)

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IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument the day of October, 2019, and has executed the referenced patent application on the day of October, 2019.	
	Joshua E. Rothenberg, Assignox
	ertificate verifies only the identity of the individual who tached, and not the truthfulness, accuracy, or validity o
STATE OF CALIFORNIA)) ss COUNTY OF LOS ANGELES)	
person(s) whose name(s) is/are subscribed to this executed the same in his/her/their authorized capa	Notary Public, I to me on the basis of satisfactory evidence to be the instrument and acknowledged to me that he/she/they with the person(s) acted, executed the
I certify under PENALTY OF PERJURY under th paragraph is true and correct.	e laws of the State of California that the foregoing
WITNESS my hand and official seal	LINDA SECERAVUST Notary Public - California Los Angeles County Commission # 128.2364 Ay Comm. Ecoires May 72, 2023
Notary's Signature	(Seal)

RECORDED: 11/27/2019

PATENT REEL: 051133 FRAME: 0384