

03-06-2006

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103191051

11-361347

113264 U.S. PTO  
11/361347

To the Director of the U.S. Patent and Trademark Office: Please record and

ments or the new address(es) below.

**1. Name of conveying party(ies)/Execution Date(s):**

Joshua Elliott Rothenberg  
Stephen John Brosnan  
Paul Thomas Epp

Execution Date(s) Feb. 17, 2006 (all)

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

**3. Nature of conveyance:**

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☐ Other

**2. Name and address of receiving party(ies)**

Name: Northrop Grumman Corporation

Internal Address:

Street Address: 1840 Century Park East, M/S 30/110/31

City: Los Angeles

State: California

Country: USA Zip: 90067-2199

Additional name(s) & address(es) attached? ☐ Yes ☒ No

**4. Application or patent number(s):**

☒ This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

**5. Name and address to whom correspondence concerning document should be mailed:**

Name: Christopher P. Harris

Internal Address: Tarolli, Sundheim, Covell & Tummino, LLP

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Fax Number: (216) 621-4072

Email Address: charris@Tarolli.com

**6. Total number of applications and patents involved:**

1

**7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00**

- ☐ Authorized to be charged by credit card  
☐ Authorized to be charged to deposit account  
☒ Enclosed  
☐ None required (government interest not affecting title)

**8. Payment Information**

a. Credit Card Last 4 Numbers \_\_\_\_\_  
Expiration Date \_\_\_\_\_

b. Deposit Account Number \_\_\_\_\_

Authorized User Name Christopher P. Harris

**9. Signature:**

*Christopher P. Harris*  
Signature

2-24-06

Date

Christopher P. Harris, Reg. No. 43.660  
Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

4

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

02/28/2006 KBETEMAI 00000018 11361347

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ASSIGNMENT

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

WHEREAS, NORTHROP GRUMMAN CORPORATION, a corporation organized and existing under the laws of the State of Delaware, with a place of business at 1840 Century Park East, M/S 30/110/31, Los Angeles, California, 90067, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon;

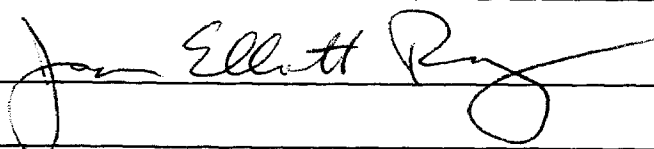
NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said NORTHROP GRUMMAN CORPORATION, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefore, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said NORTHROP GRUMMAN CORPORATION, as assignee of my entire right, title and interest.

I also hereby sell and assign to NORTHROP GRUMMAN CORPORATION, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including but not limited to, the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said NORTHROP GRUMMAN CORPORATION, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said NORTHROP GRUMMAN CORPORATION, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

I further authorize and direct the attorneys of record to insert the serial number and filing date of said application now identified by the attorney docket number and title set forth above as soon as the same shall have been made known to them by the United States Patent and Trademark Office.

IN WITNESS WHEREOF, I hereunto set hand and seal this day and year;

TITLE OF INVENTION	High Efficiency, High Power Cryogenic Laser System
SIGNATURE OF INVENTOR AND NAME	JOSHUA ELLIOTT ROTHENBERG 
DATE	2/17/06
RESIDENCE (STREET, CITY, STATE, COUNTRY)	1537 S. Doheny Drive Los Angeles, CA 90035 USA
DATE APPLICATION EXECUTED	2/17/06

TITLE OF INVENTION	High Efficiency, High Power Cryogenic Laser System
SIGNATURE OF INVENTOR AND NAME	STEPHEN JOHN BROSNAN <i>Stephen John Brosnan</i>
DATE	<i>2/17/06</i>
RESIDENCE (STREET, CITY, STATE, COUNTRY)	1009 S. Trotwood Avenue San Pedro, CA 90732 USA
DATE APPLICATION EXECUTED	<i>Stephen J Brosnan</i> <i>2/17/06</i>

TITLE OF INVENTION	High Efficiency, High Power Cryogenic Laser System
SIGNATURE OF INVENTOR AND NAME	PAUL THOMAS EPP <i>Paul Thomas EPP</i>
DATE	<i>2/17/06</i>
RESIDENCE (STREET, CITY, STATE, COUNTRY)	1804 12th Street, Apt. #3 Manhattan Beach, CA 90266 USA
DATE APPLICATION EXECUTED	<i>2/17/06</i>